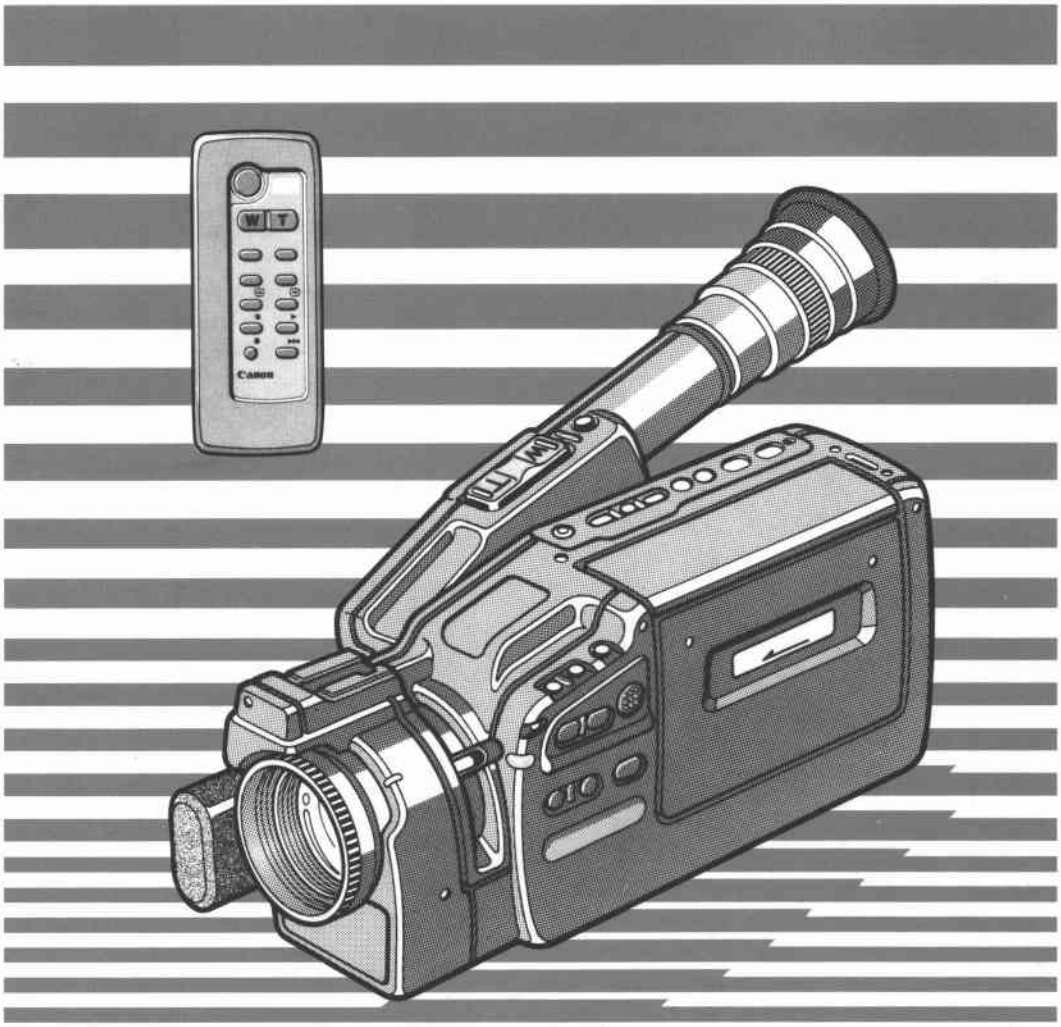
C3/20-1017

8

Canon E430

8mm VIDEO CAMCORDER

Instruction Manual

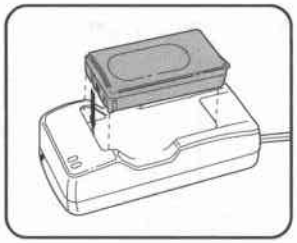


E ENGLISH
PAL

DC 6V ⎓

Before Using the Camcorder

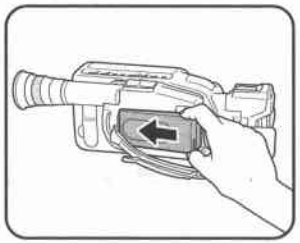
Charging the Battery Pack



Make sure the battery pack is fully charged before use.

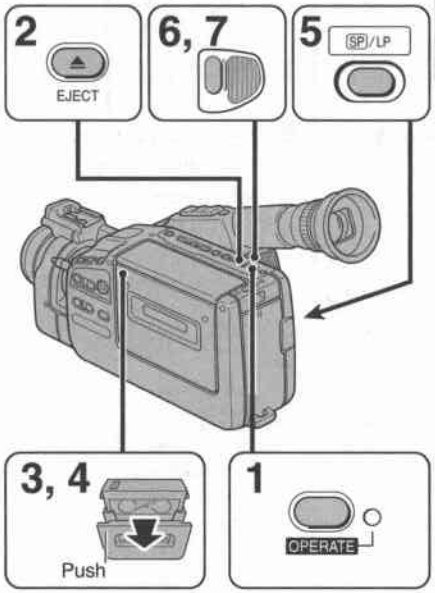
1. Connect the battery pack to the CA-100.
2. Plug into a mains outlet.
   When the battery pack is fully charged, the charge indicator glows steadily.

Attaching the Battery Pack



1. Slide the battery pack into the power source compartment.
   Slightly loosen the grip belt and press it down for easy battery loading.
2. Press the battery pack until it clicks and locks in place.

Recording



Before recording, make sure a power source is attached to the camcorder.

1. Press the **OPERATE** button to turn the camera on.
2. Press the ▲ **(EJECT)** button to open the cassette compartment.
3. Load the cassette.
4. Close the cassette compartment.
5. Press the **SP/LP** button to select the tape speed.
6. Press the start/stop button to start recording.
   The tally lamp flashes rapidly and "REC" appears in the viewfinder.
7. Press the start/stop button to place the camera in record pause mode.

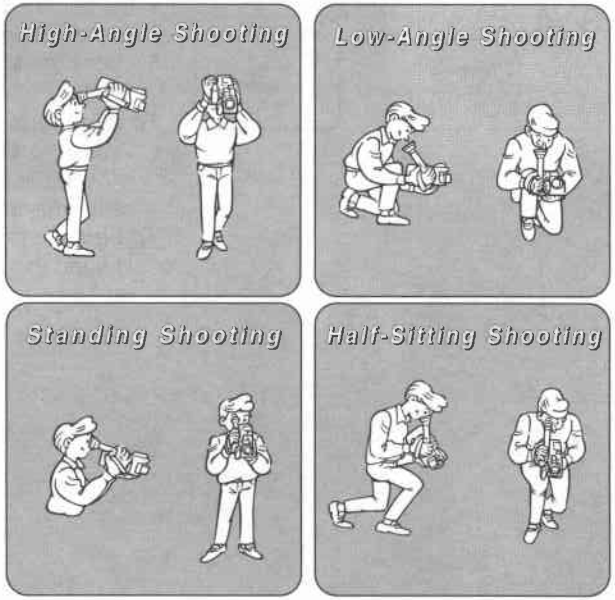
To continue recording

• Press the start/stop button again.

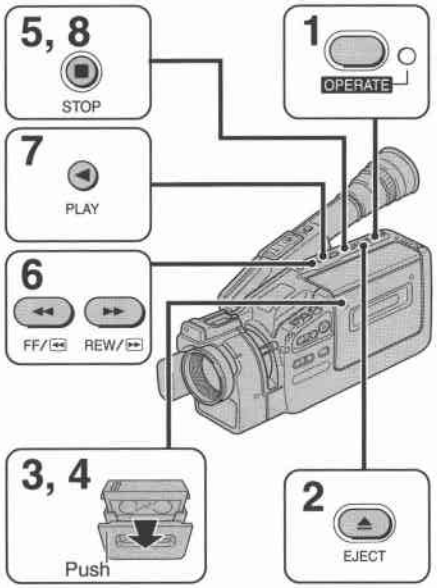
To end operation

• Unload the cassette and turn the camera off.

Advice for Shooting



Playback



Before playback, make sure a power source is attached to the camcorder (CA-100 with DC-100, or battery pack).

1. Press the **OPERATE** button to turn the camera on.
2. Press the ⏏ **(EJECT)** button to open the cassette compartment.
3. Load the cassette.
4. Close the cassette compartment.
5. Press the ■ **(STOP)** button to select playback mode.
6. Locate the playback start point using the ◀◀ **(FF)** and ▶▶ **(REW)** buttons.
7. Press the ◀ **(PLAY)** button to start playback.
   If a television is connected to the camcorder, you can also monitor playback on the television.
8. Press the ■ **(STOP)** button to end playback.

To change to record pause mode

- Press the ● **(REC)** button.
  "PAUSE" appears in the viewfinder and the camcorder is put in record pause mode.

To end operation

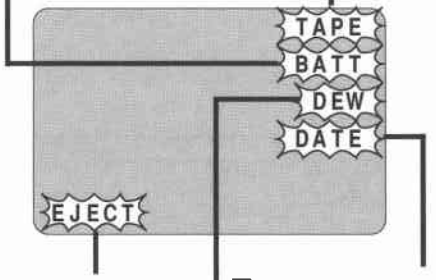
- Unload the cassette and turn the camcorder off.

Troubleshooting

Use the following checklist for troubleshooting when you have problems with your camcorder.
See the instruction manual for further information.
Warnings that appear in the viewfinder:

■ *The battery pack charge is low.*
⇒ Replace it with a fully charged battery pack.

■ *A cassette has not been loaded.*
⇒ Load a cassette.



■ *The safety mechanism is activated.*
⇒ Unload and reload the cassette.

■ *The lithium battery is not in place properly or the charge is low.*
⇒ Insert a new lithium battery.

■ *Condensation has formed inside the camera.*
⇒ Refer to the instruction manual.

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Thank you for purchasing the Canon 8mm Video Camcorder E430.
The E430 can be used for both recording and playback of video cassettes in 8mm format.

- **Use 8mm video cassettes marked with an 8 (P5 type).**

Please check that this package contains the following items:

E430
- Lens Cap and Lens Cap Cord
- Lens Hood
- SF-200 Sports Finder
- One Lithium Battery
- WL-50 Wireless Controller
- Two R03/AAA Batteries

- VL-7 Battery Video Light (U.K. only)
- DC-100 DC Coupler
- BP-E77K Battery Pack
- CA-100 Compact Power Adapter
- SS-300 Shoulder Strap
- PC-150 SCART Cable

Important Usage Instructions

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

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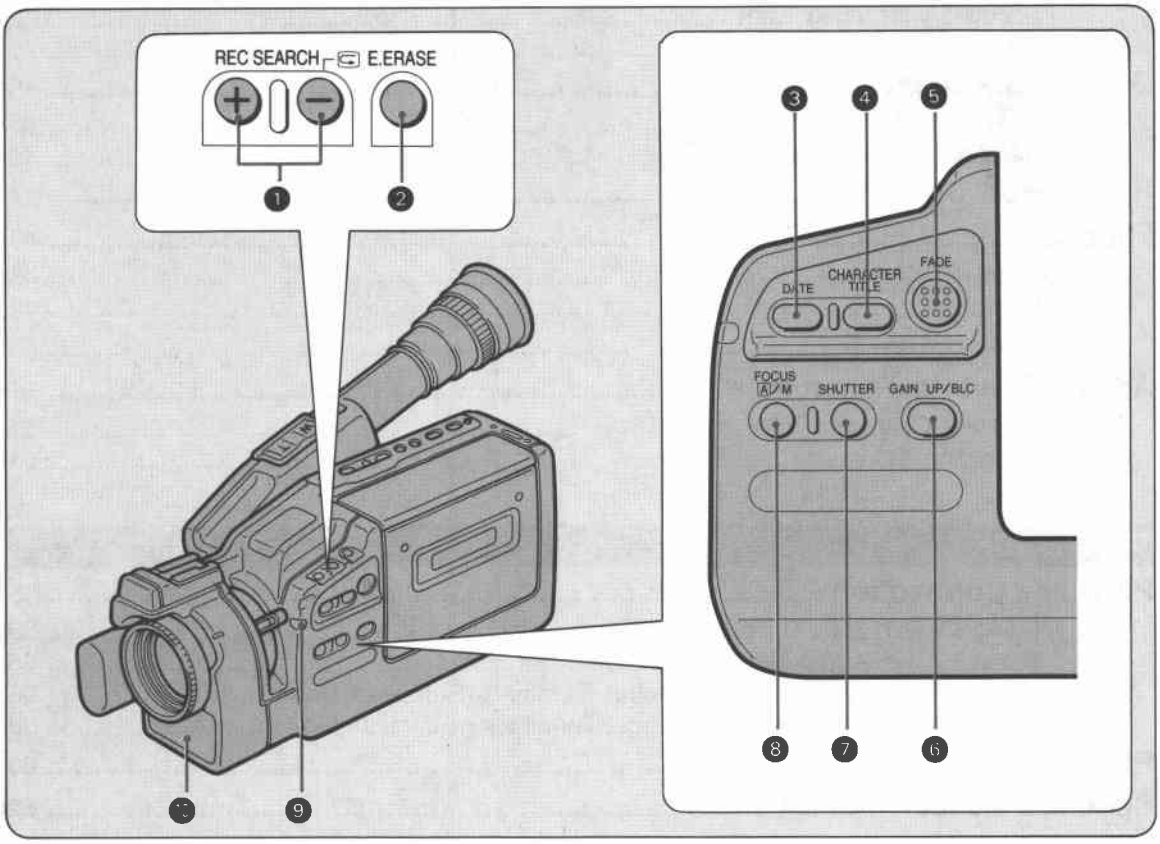
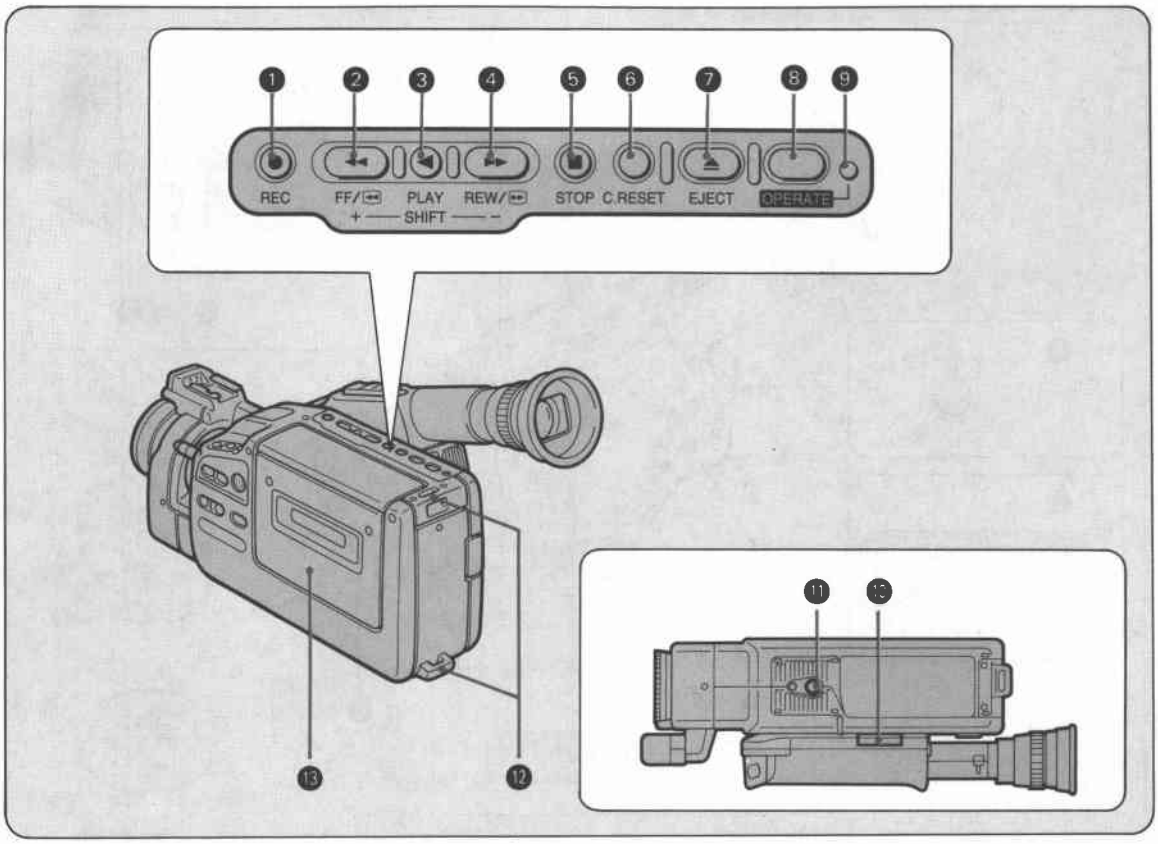
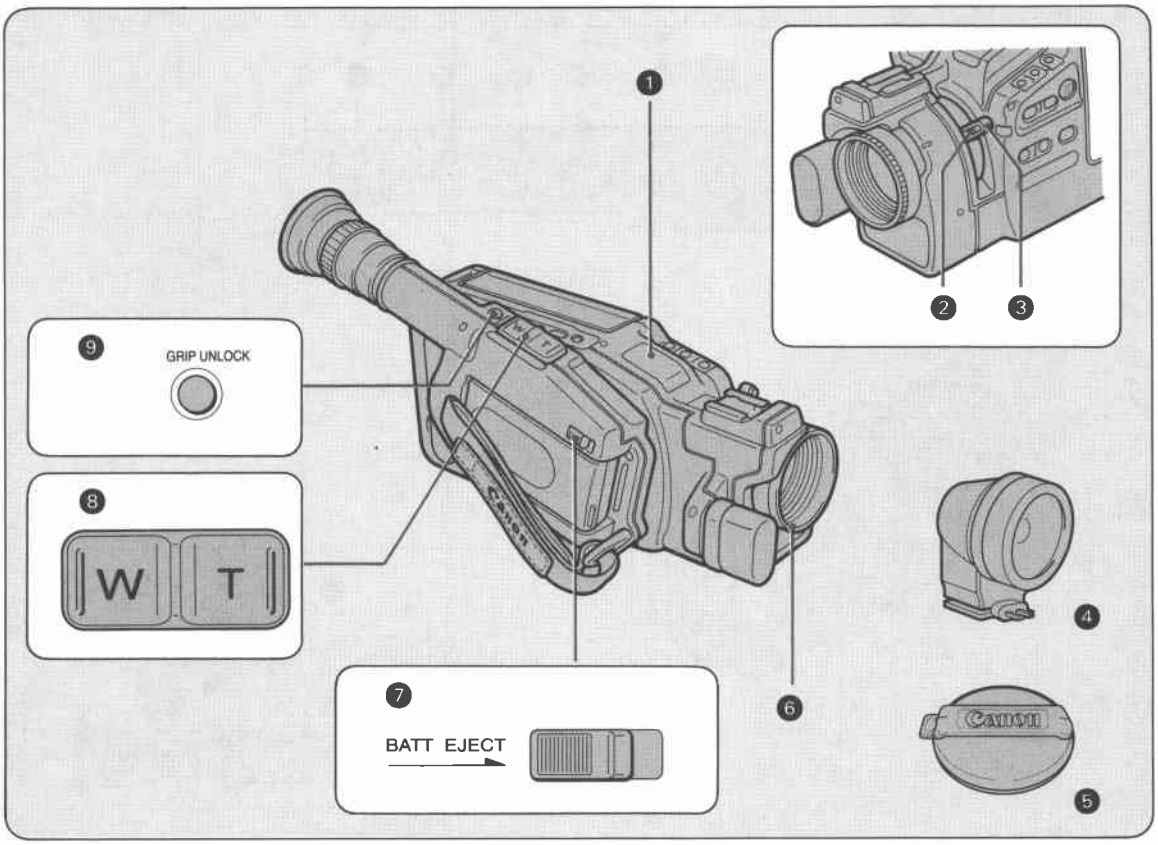
Camera Parts and Functions



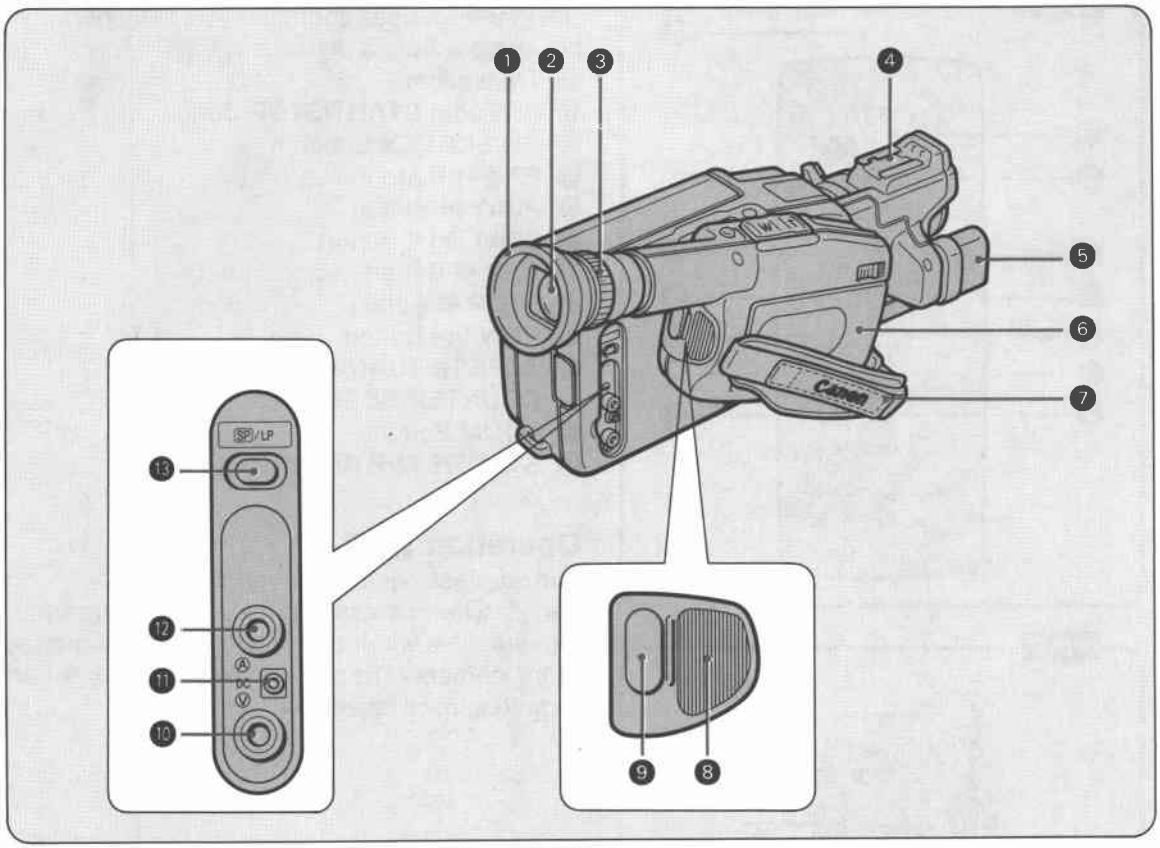
1. **REC SEARCH** + / – Buttons
   (Record Review) Button
2. **E.** (Edit) **ERASE** Button
3. **DATE** Button
4. **CHARACTER TITLE** Button
5. **FADE** Button
6. **GAIN UP/BLC** Button
7. **SHUTTER** Button
8. **FOCUS A/M** (Auto/Manual) Button
9. Tally Lamp
   The tally lamp performs two important functions:
   - Flashes rapidly during recording.
   - Lights up when wireless controller is in use.
10. Autofocus Window



1. ● **(REC)** (Record) Button
2. ◀◀ **(FF)** Button / **+** Button
3. ◀ **(PLAY)** Button / **SHIFT** Button
4. ▶▶ **(REW)** Button / **–** Button
5. ■ **(STOP)** Button
6. **C.** (Counter) **RESET** Button
7. ▲ **(EJECT)** Button
8. **OPERATE** Button
9. OPERATE Indicator
   The OPERATE indicator lights up during normal operation, and flashes to warn that there is internal condensation, a malfunction, or to indicate that the battery pack needs to be recharged.
10. Lithium Battery Compartment
11. Tripod Socket
12. Strap Attachment Bars
13. Video Cassette Compartment



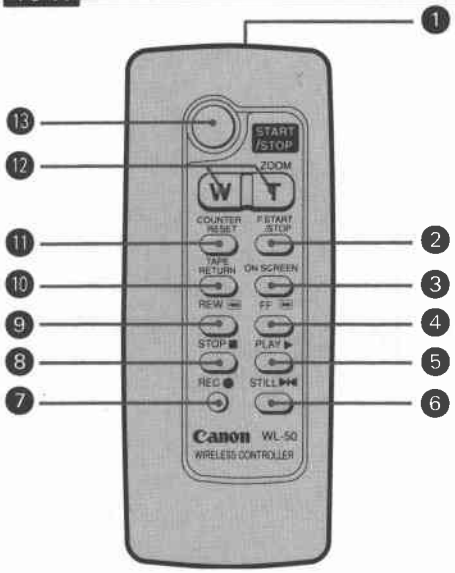
1. Remote Sensor
2. Macro Button
3. Zooming Lever
4. Video Light
5. Lens Cap
6. Focusing Ring / Lens Hood
7. **BATT** (Battery) **EJECT** Switch
8. Power Zoom Buttons
9. **GRIP UNLOCK** Button



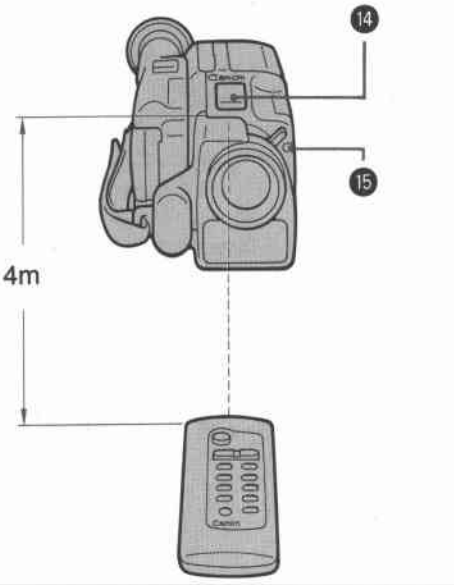
1. Eyecup
2. Viewfinder
3. Dioptre Adjustment Ring
4. Accessory Shoe
5. Microphone
6. Power Source Compartment
7. Grip Belt
8. Thumb Rest
   Place your thumb here when you are recording or carrying the camera.
9. Start/Stop Button
10. Video Output Terminal
11. DC Output Terminal
12. Audio Output Terminal
13. SP/LP (Tape Speed Select) Button

WL-50 Wireless Controller

10-A



10-B



Using the wireless controller you can operate the camera from a distance. 10-A

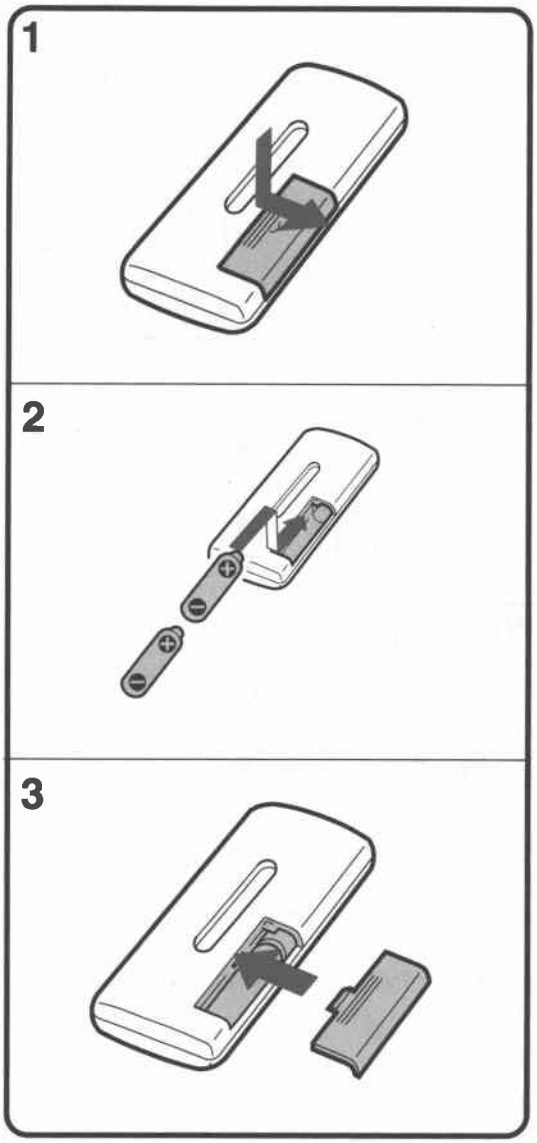
1. Transmitter
2. **F.** (Fade) **START/STOP** Button
3. **ON SCREEN** Button
4. **FF** ⏩ Button
5. **PLAY** ▶ Button
6. **STILL** ▶⏭ Button
7. **REC** ● Button
8. **STOP** ■ Button
9. **REW** ⏪ Button
10. **TAPE RETURN** Button
11. **COUNTER RESET** Button
12. **ZOOM** Buttons
13. **START/STOP** Button

Operation 10-B

Aim wireless controller at camera remote sensor 14 and press control buttons to operate camera. Use wireless controller within 4 metres of the camera. The tally lamp 15 lights up when remote sensor receives a signal.

Notes:

- When using wireless controller check that it lights up the tally lamp. If tally lamp lights, wireless controller can be used from that position.
- If you are too close to camera when operating wireless controller, camera may not respond to wireless controller's signal.



Inserting Batteries into Wireless Controller

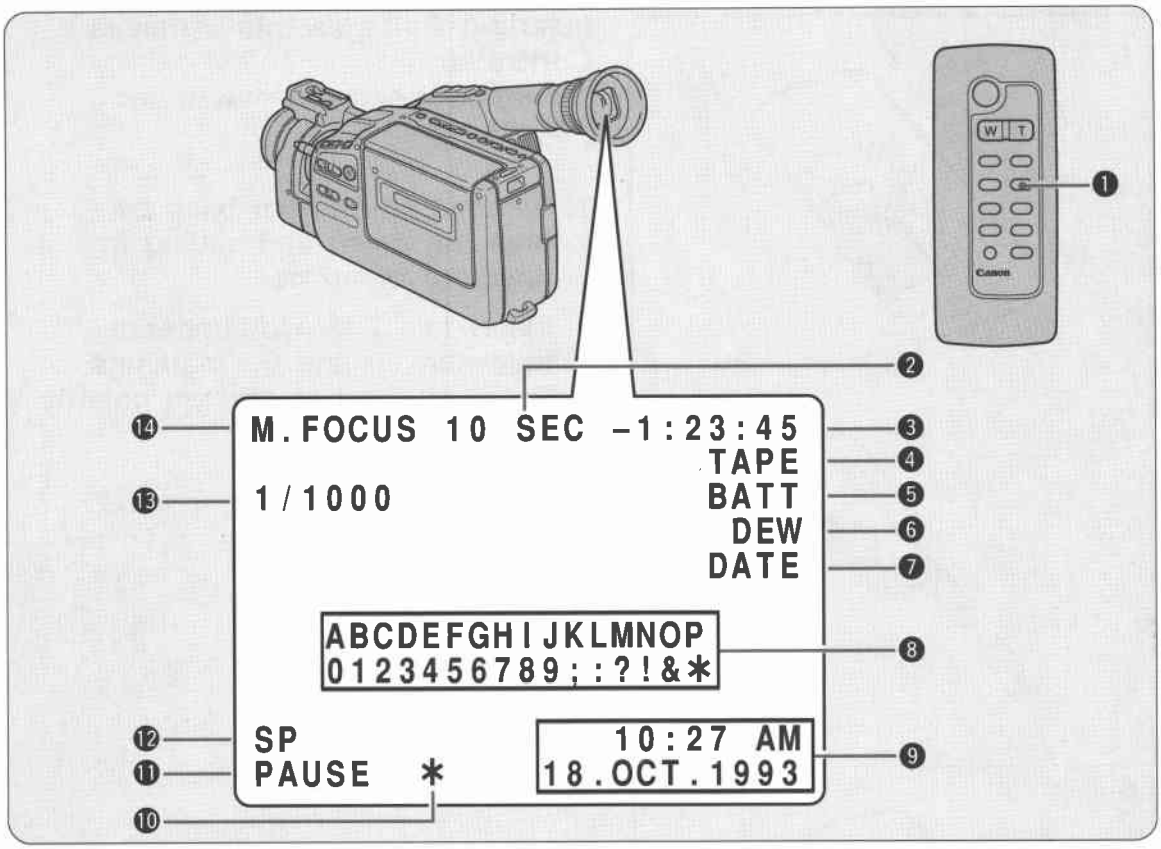
The wireless controller operates on two R03/AAA batteries.

1. **Remove cover from back by pressing down and sliding in direction of arrow.**
2. **Insert two R03/AAA batteries following ⊕ and ⊖ markings. Be careful not to reverse polarity of batteries.**
3. **Replace cover.**

Notes:

- Do not leave wireless controller exposed to direct sunlight or in hot or humid places.
- Autofocus function stops when remote sensor receives a signal from wireless controller.
- Wireless controller uses infrared beams to transmit signals, so sunlight or fluorescent light on the remote sensor may shorten operating distance.
- Wireless controller will not function if RS-300 Rain Shield is attached to the camera.

Viewfinder Displays



Viewfinder displays provide information and warnings regarding camera operation, recording and playback. Press ON SCREEN button ❶ on wireless controller to see viewfinder displays except ❽ and ❾ on a connected TV screen.

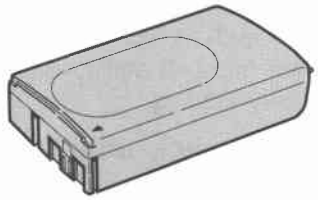
- Press CHARACTER TITLE button to see character title on TV, DATE button for date and time. Only title, date and time are recorded with scenes.

No.	Mode	
❷	Recording Reminder	☞ p. 29
❸	Tape Counter	☞ p. 29
❹	Video Cassette Warning	☞ p. 30
❺	Battery Warning	☞ p. 30
❻	Condensation Warning	☞ p. 75
❼	Lithium Battery Warning	☞ p. 18
❽	Character Title	☞ p. 51

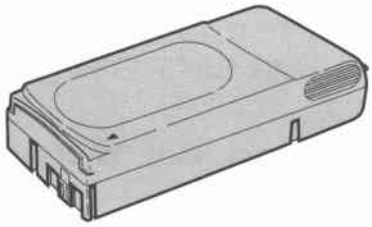
No.	Mode	
❾	Date and Time	☞ p. 19, 35
❿	Edit-erase	☞ p. 34
⓫	Tape Operations	☞ p. 26
⓬	Tape Speed	☞ p. 26
⓭	High-Speed Shutter	☞ p. 47
⓮	Manual Focus	☞ p. 38

Power Sources

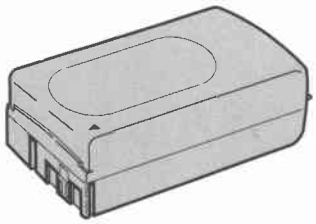
13-A



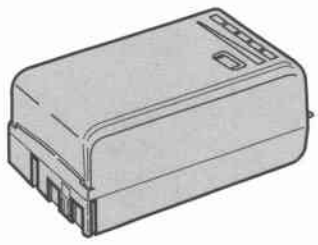
13-B



13-C



13-D



Using Battery Pack

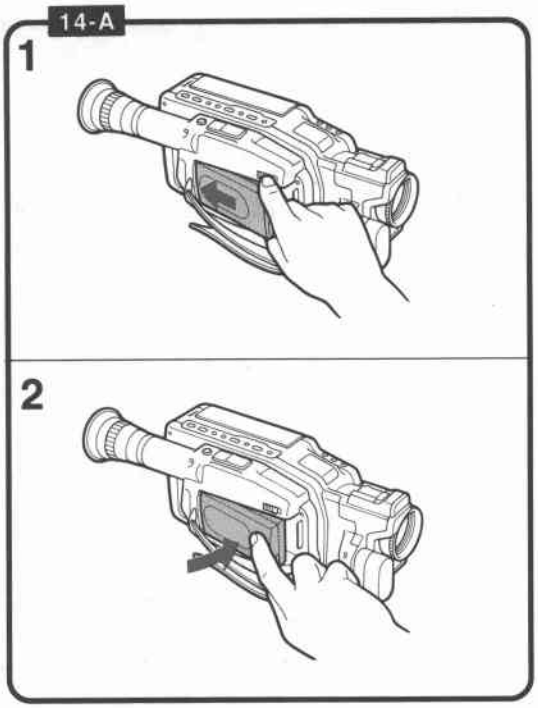
BP-E77K 13-A
BP-E718 (option) 13-B
BP-E722 (option) 13-C
BP-E722D (option) 13-D **Battery Pack**

Make sure battery pack is fully charged before use.

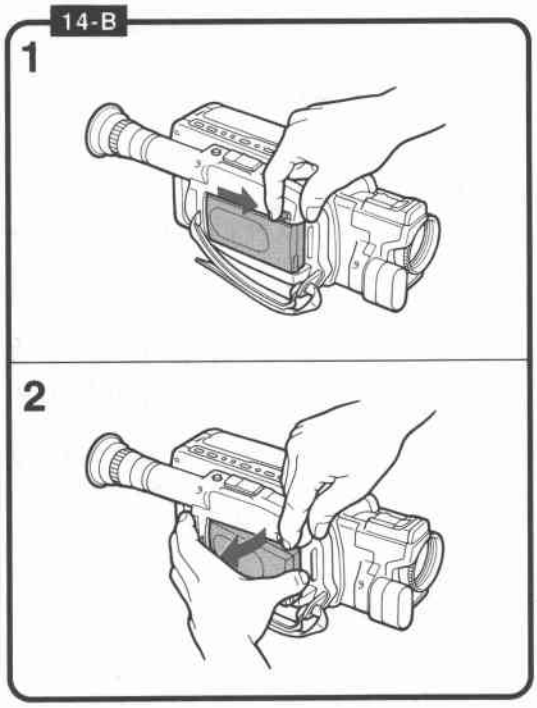
Continuous recording time of BP-E77K is approximately 55 minutes.

- Some modes consume more power than others, so actual recording time may be less than 55 minutes.
- The safest policy is to have enough batteries to cover two to three times the length of recording time scheduled.
- Using battery pack in cold temperatures will shorten recording time.
- Battery pack normally becomes warm during use.
- Battery's + and – terminals may short circuit if they come in contact with any metal objects. Take care when handling battery pack, and keep it in plastic or other protective covering when carrying or storing.
- Power is slowly drained while the battery pack is attached to the camera, even when the camera is turned off. Remove the battery pack when you don't expect to use the camera.
- Use the optional BP-E718, BP-E722 or BP-E722D Battery Pack for lengthy recording (see p. 70).
- See battery pack instruction manual for further information regarding battery pack.
- See p. 78 for Using Your Battery Packs Effectively.
- Canon camcorders and accessories are manufactured with great care and strict quality control. It is recommended that you use only genuine Canon brand batteries and other accessories for your camcorder to ensure maximum performance.

14-A



14-B



Attaching Battery Pack 14-A

1. Slide battery pack into power source compartment.

- Insert the end marked with a triangle.
- Slightly loosen grip belt and press it down for easy battery loading.

2. Press battery pack until it clicks and locks in place.

Removing Battery Pack 14-B

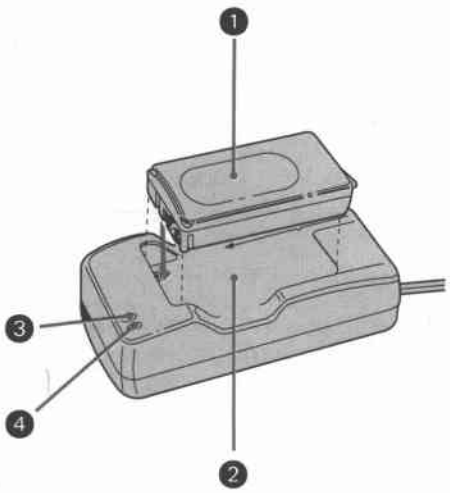
Caution

Be sure to turn camera off (the OPERATE indicator goes off) before removing battery pack. Removal during operation may cause damage.

1. Slide and hold BATT EJECT switch up.

2. Pull battery pack out, as shown.

15-A



Charging Battery Pack 15-A

Use the CA-100 Compact Power Adapter or the optional CB-110 Car Battery Adapter to charge battery pack.

Connect the battery pack to the CA-100 (or CB-110) as shown and plug into mains outlet (or car cigarette lighter socket).

When the OPERATE indicator (green) is glowing steadily and the CHARGE indicator (red) is blinking, charging has begun. When the battery pack is fully charged, the CHARGE indicator will glow steadily. Disconnect the battery pack from CA-100 (or CB-110).

1. Battery Pack
2. CA-100 Compact Power Adapter or CB-110 Car Battery Adapter
3. Charge Indicator
4. Operate Indicator

- Always disconnect the DC-100 DC Coupler from the CA-100 (or CB-110) before charging the battery pack.
- The charging time for one battery pack is shown in the table on the next page. Charging time will vary according to ambient temperature and remaining charge in battery.
- When charging a brand-new battery pack or one that has not been used for three months or more, charge up completely (until the CHARGE indicator lights). Then disconnect and reconnect battery pack to charge once again.
- It is possible to charge battery pack in an ambient temperature range of 0°C–40°C, but for best results, charge between 10°C–30°C. Use of battery pack in extremely high temperatures (above 40°C) may activate safety circuit, making operation impossible.
- When you don't expect to use battery pack for a long time (three months or more), **store it in a discharged condition**. Storing the battery pack in a charged condition will shorten its operating life.
- Immediately after use the battery pack will be hot, and it is best not to recharge it at this time. Make sure the battery pack has cooled off before recharging it.
- The optional MC-100 Multi-battery Charger can also be used.

For further information, see the adapter or charger instruction manual.

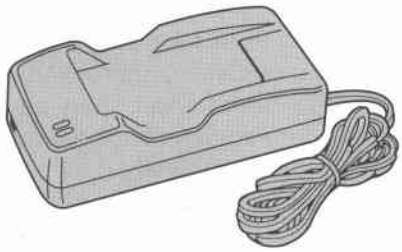
Battery pack	Continuous recording time	Charging time
BP-E77K	approx. 55 minutes	approx. 70 minutes
BP-E718	approx. 100 minutes	approx. 120 minutes
BP-E722/BP-E722D	approx. 115 minutes	approx. 130 minutes

Battery Warning

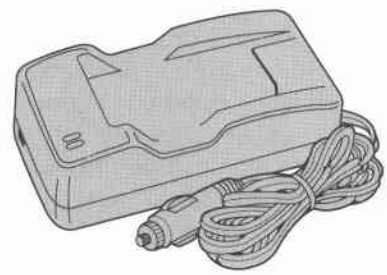
When battery charge is nearly exhausted, "BATT" flashes in camera viewfinder and the OPERATE indicator also flashes. Replace or recharge battery pack (be sure to turn camera off before removing the battery pack).
Before recharging battery pack it is important to discharge it completely. See "Using Your Battery Packs Effectively" (p. 78).

- If the camera is turned on with an exhausted battery pack attached, it may turn off immediately, without a "BATT" warning.

16-A



16-B



Using AC Power

CA-100 Compact Power Adapter

16-A

Plug into mains outlet.
Input voltage: 100–240 V AC, 50/60 Hz.

- Use together with the DC-100 DC Coupler.
- Refer to CA-100 instruction manual for further details.

Using Car Battery

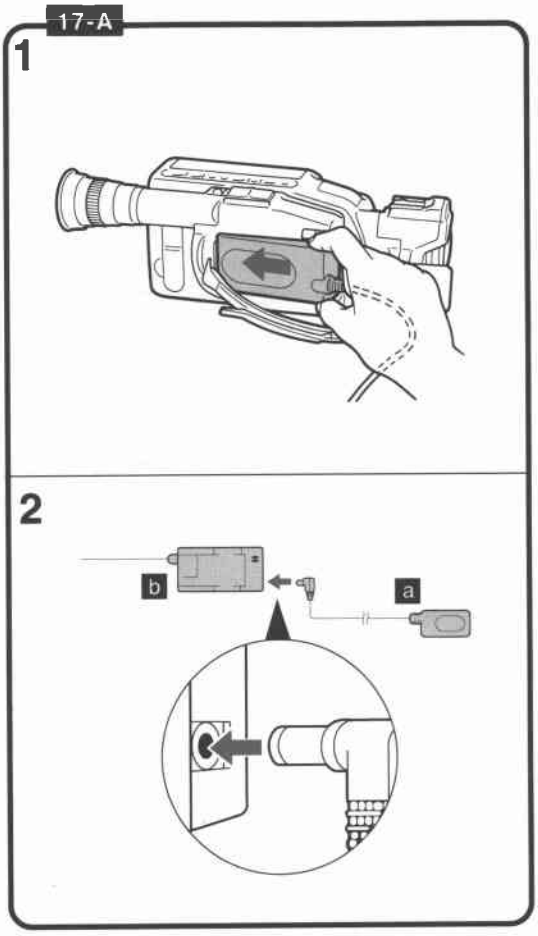
CB-110 Car Battery Adapter (option)

16-B

Plug into cigarette lighter socket.
For use only with 12 or 24 V DC negative-ground car battery.

- Use together with the DC-100 DC Coupler.
- Use car battery adapter with the car engine idling.
- Refer to CB-110 instruction manual for further details.

17-A



Attaching DC Coupler 17-A

To use the compact power adapter or car battery adapter:

1. Insert DC-100 DC Coupler into power source compartment.

- Insert and remove in the same way as the battery pack (see p. 14).

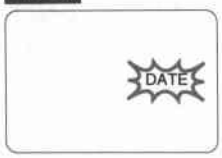
2. Connect DC-100 cable to compact power adapter (or car battery adapter).

a DC-100
b CA-100 (CB-110)

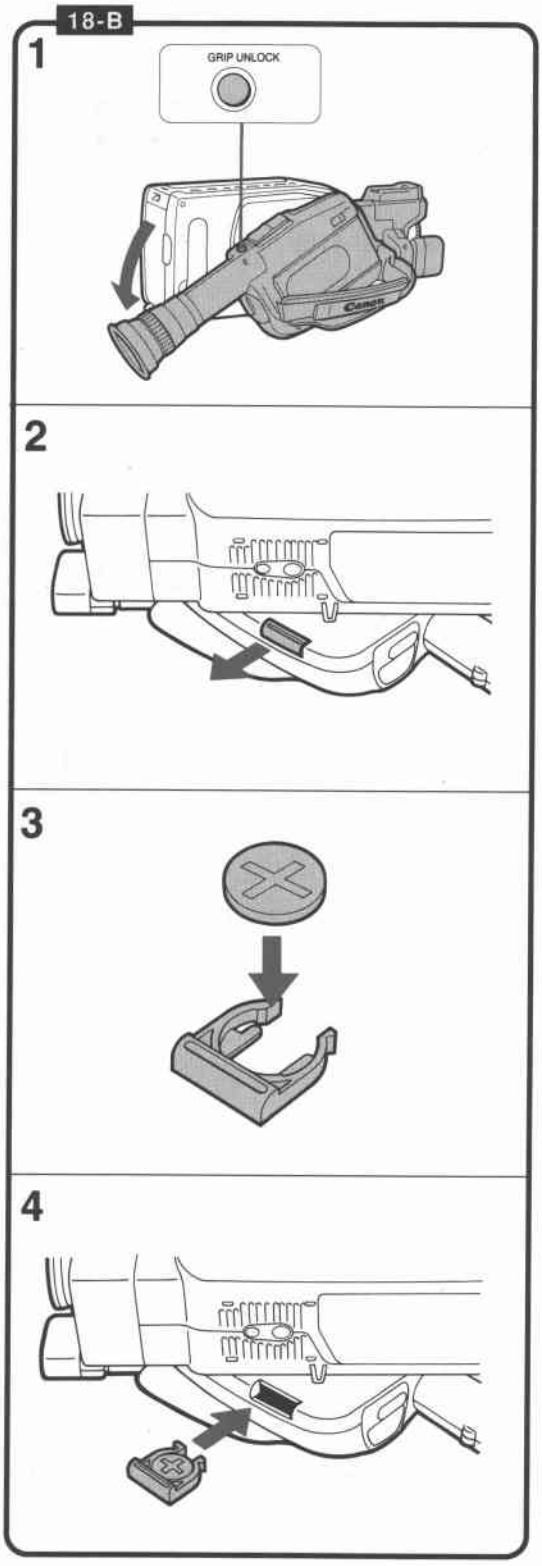
Caution

- Using the compact power adapter near the TV may cause the TV to emit noise. If this occurs, move the compact power adapter further away from the TV or aerial cable.

18-A



18-B



Inserting New Lithium Battery

The CR2025 type lithium battery provides your camera with enough power to store the date and time and a character title, even when the camera is turned off.

One lithium battery will last approximately one year. (Life span of lithium battery varies slightly according to ambient conditions.) When the lithium battery is not in place or is nearly exhausted, "DATE" flashes in viewfinder, indicating that the lithium battery needs to be replaced. 18-A

Be sure to connect a power source to the camera before changing the lithium battery, otherwise, the date and time and character title will be cleared from camera's memory and will have to be reset.

Inserting Procedure 18-B

1. **Press GRIP UNLOCK button and rotate the grip downward.**
2. **Hold the camera with the battery pack facing down, then draw out the lithium battery holder.**
   - If the camera is held with the battery pack facing up, the lithium battery will drop out when the lithium battery holder is removed.
3. **Insert a new lithium battery into the lithium battery holder with + side facing up.**
4. **Snap the lithium battery holder into the compartment.**

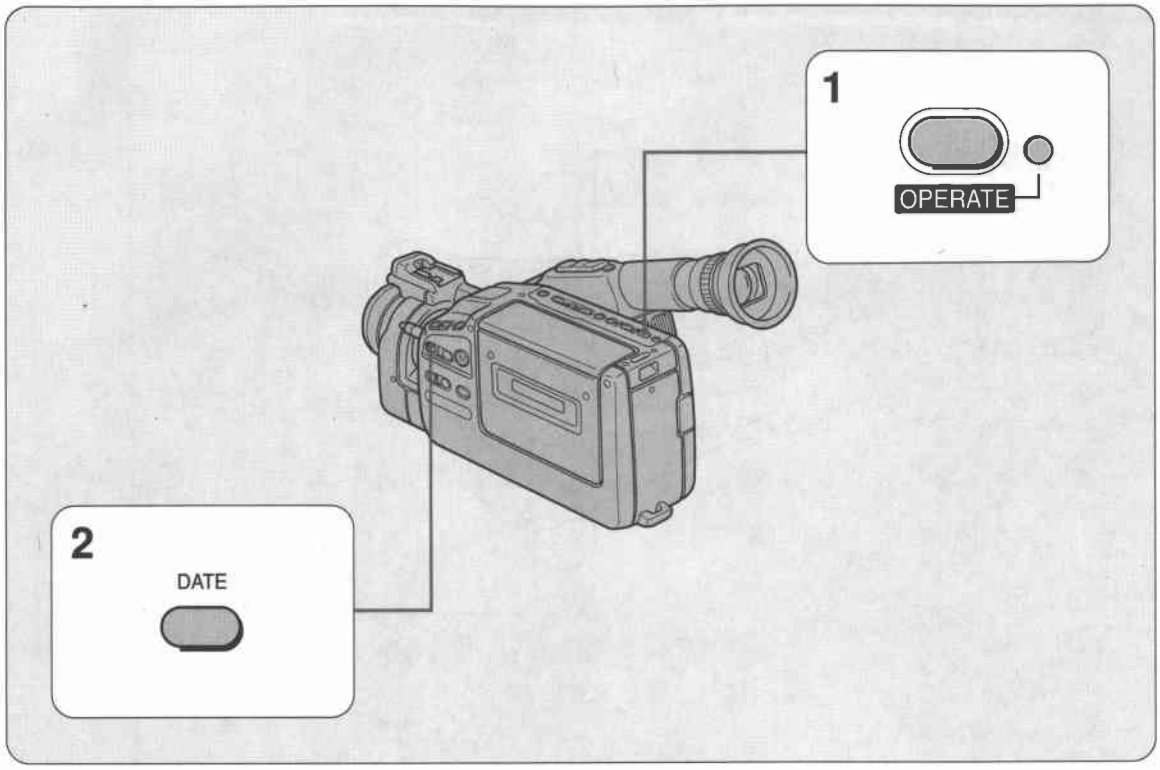
Warning

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate. Replace battery with Panasonic CR2025 or Duracell DL2025B. Use of another battery may present a risk of fire or explosion. The used battery should be handed back to the supplier for safe disposal.

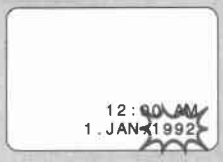
Caution

- Make sure + side is facing up in lithium battery compartment.
- Keep battery out of children's reach. If swallowed, contact physician immediately.
- To ensure proper contact, wipe battery with clean, dry cloth before use.
- Do not pick up battery using tweezers or other metal tools which may cause short circuiting.
- Do not disassemble, heat or immerse in water, to avoid risk of explosion.

Setting Date and Time



19-A



Set date and time when you first begin using the camera and when you change the lithium battery without back-up power. See p. 35 for recording date and time.

Example: Setting date to 20 October, 1993 and time to 2:35 p.m.

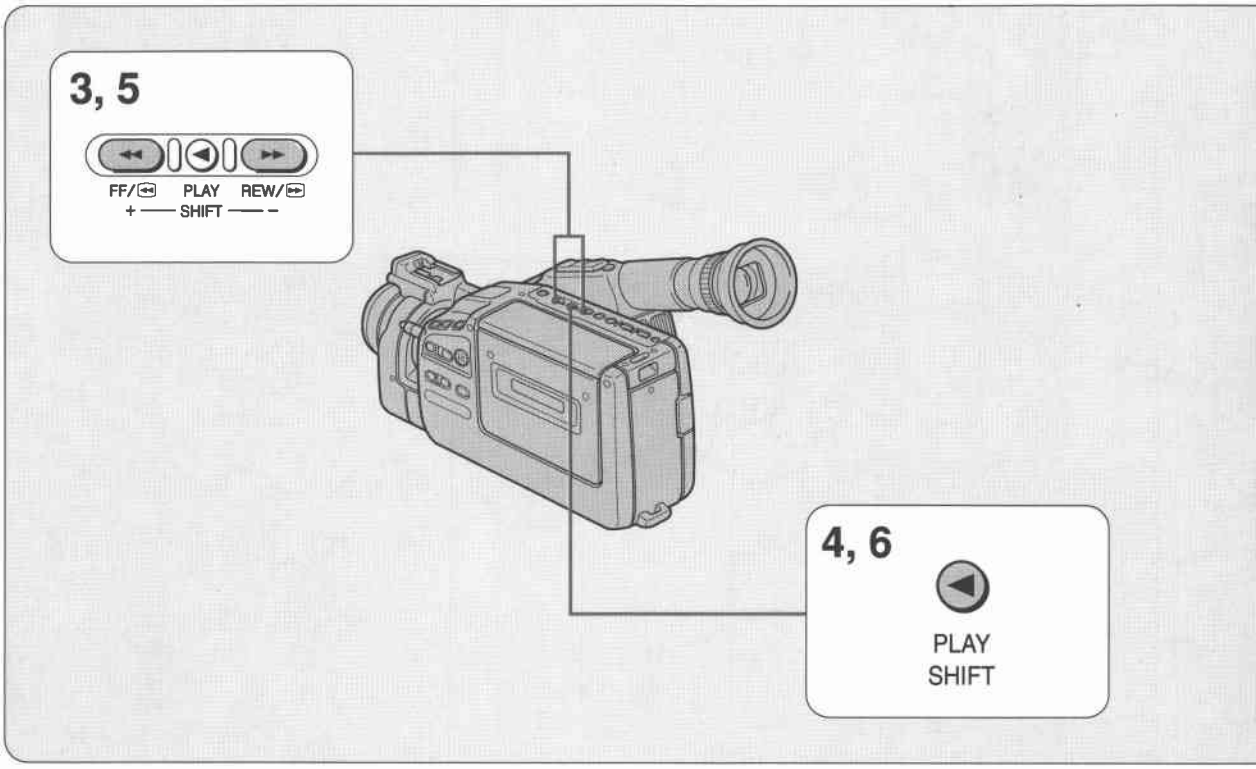
1. Turn camera on by pressing OPERATE button.

- OPERATE indicator lights up.

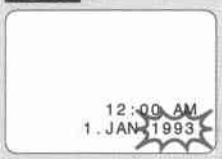
2. Press and hold DATE button for more than 3 seconds. 19-A

- Date and time are displayed in viewfinder.
- Year display flashes in viewfinder.

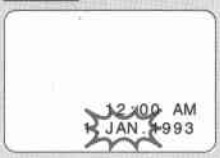
(continued on next page)



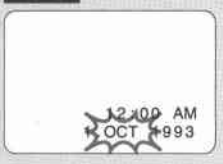
20-A



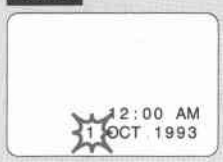
20-B



20-C



20-D



3. Press + and – buttons to scan year display.

20-A

- Press once to scan one year at a time.
- Press and hold to scan years quickly.
- Press – button to scan display in reverse order.

↻ 1992 ↔ 1993 ↔ ••••• ↔ 2009 ↔ 2010 ↔ 2011 ↺

4. Press SHIFT button when correct year is shown.

- Year is set and month display flashes. 20-B

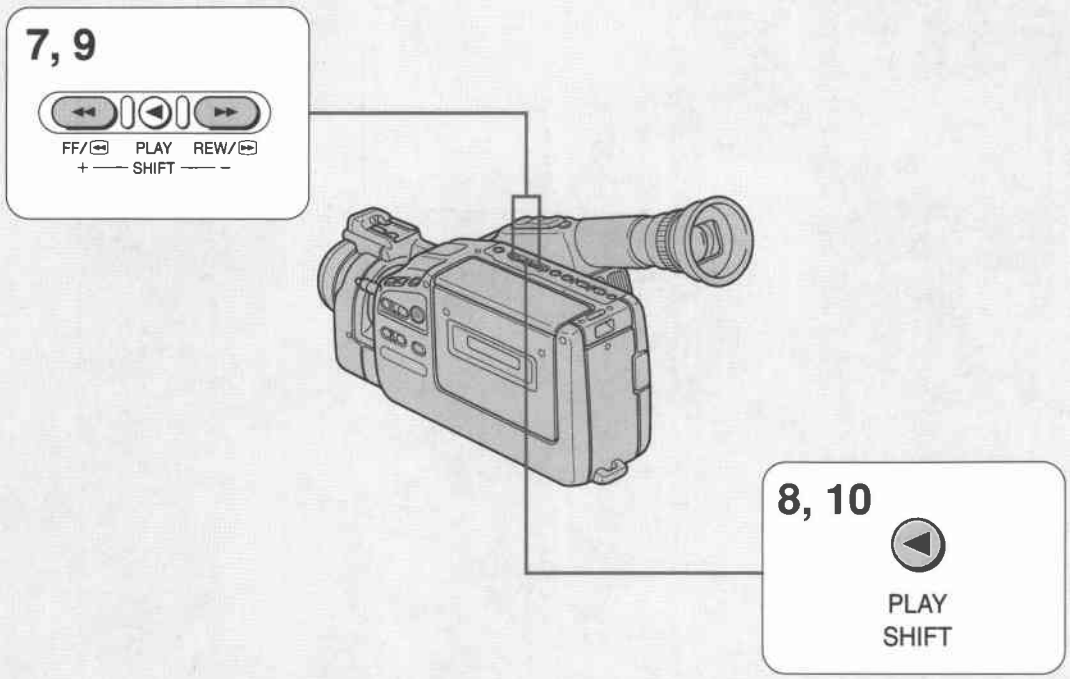
5. Press + and – buttons to scan month display.

20-C

↻ JAN ↔ FEB ↔ ••••• ↔ OCT ↔ NOV ↔ DEC ↺

6. Press SHIFT button when correct month is shown.

- Month is set and day display flashes. 20-D

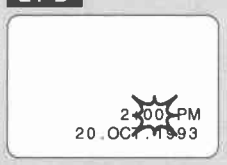


21-A

21-B

21-C

21-D



7. Press + and – buttons to scan day display. 21-A

- The camera knows the number of days in each month and which years are leap years.

↻ 1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ ••••• ↔ 27 ↔ 28 ↔ 29 ↔ 30 ↔ 31 ↺

8. Press SHIFT button when correct day is shown.

- Date is set and hour display flashes. 21-B

9. Press + and – buttons to scan hour display.

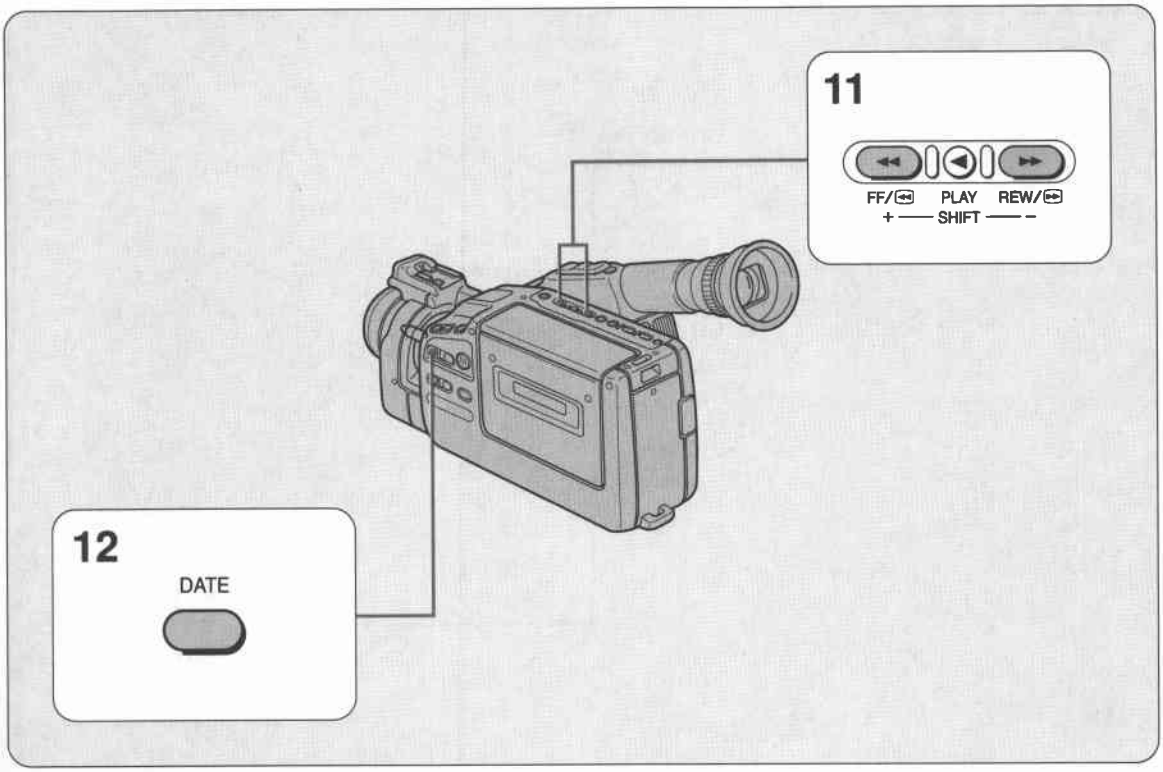
- Hour display rotates through 24 hours. 21-C

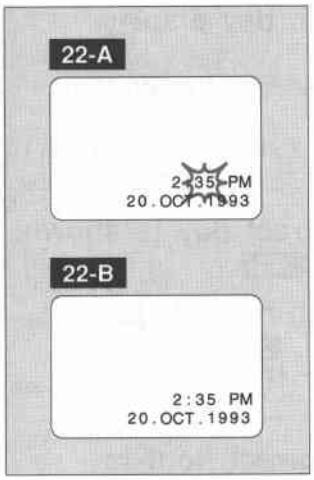
↻ 12AM ↔ 1AM ↔ ••••• ↔ 10PM ↔ 11PM ↺

10. Press SHIFT button when correct hour is shown.

- Hour is set and minute display flashes. 21-D

(continued on next page)





11. Press + and – buttons to scan minute display.

- Minute display rotates through 60 minutes. 22-A

→ 00 ↔ 01 ↔ 02 ↔ ••••• ↔ 58 ↔ 59 ←

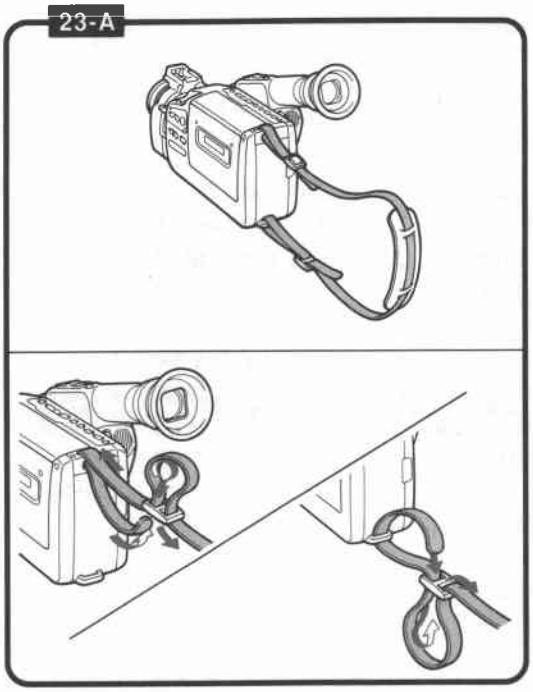
12. Press DATE button when correct minute is shown.

- Minute display stops flashing and auto date and time starts functioning. 22-B
- Press DATE button again to make display disappear from viewfinder.

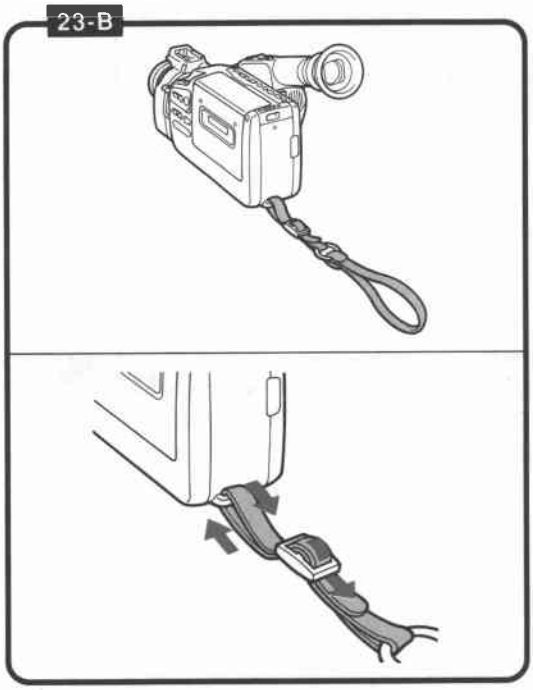
Notes:

- The date can be set between 1 January, 1992, and 31 December, 2011.
- Date and time cannot be set during camera recording or in playback mode.
- If you change or remove the lithium battery without a power source attached, the date and time are cleared from memory.
- Reset date and time when you travel to a different time zone.
- To make a partial change to date or time settings, follow steps 1 and 2 on page 19. Then press SHIFT button to select settings to change. When finished, press DATE button.

23-A



23-B



Attaching Strap

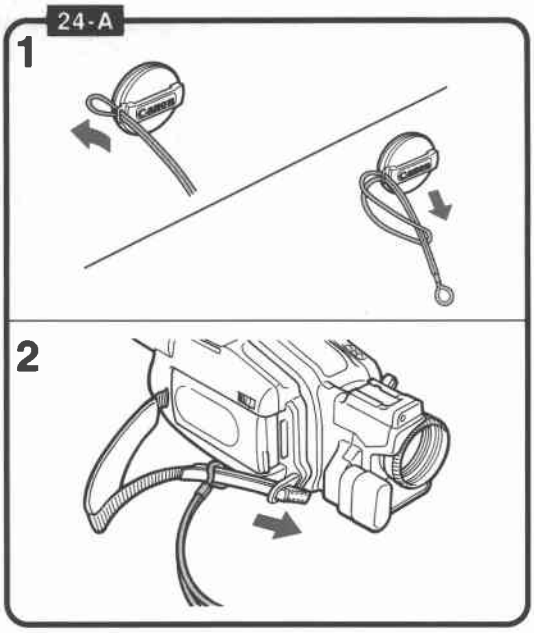
SS-300 Shoulder Strap 23-A

Attach shoulder strap to the strap attachment bars, and adjust it to the most comfortable length.

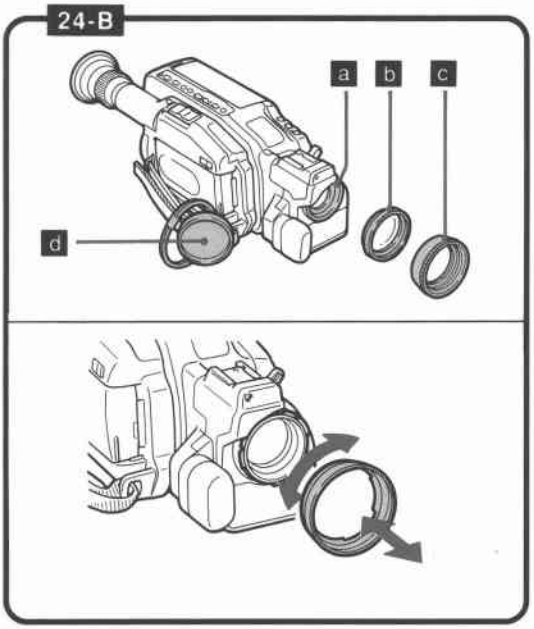
WS-20 Wrist Strap (option) 23-B

The optional wrist strap can only be attached to the lower strap attachment bar.

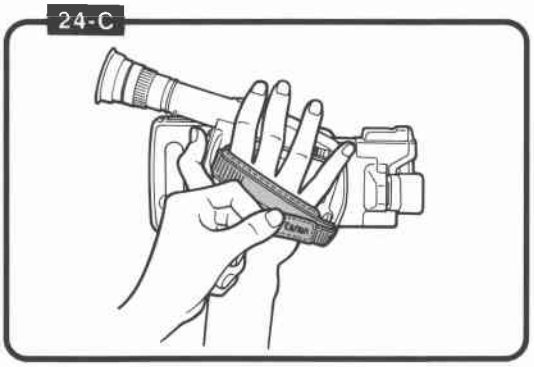
24-A



24-B



24-C



Attaching Lens Cap Cord 24-A

1. **Pass the cord provided through the loop on the lens cap.**
2. **Pass the grip belt through the ring of cord. Then pass the grip belt through the loop on the camera as shown.**

Removing and Attaching Lens Cap and Lens Hood 24-B

Remove lens cap before recording and hook it onto grip belt using clip on lens cap. Replace lens cap when you stop recording or turn the camera off.

a Focusing Ring
b Filter (option)
c Lens Hood
d Lens Cap

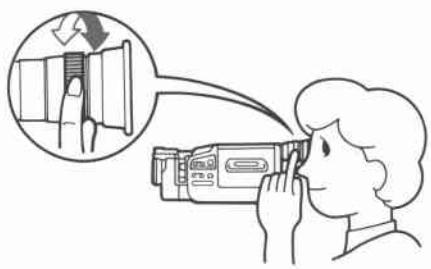
To remove the lens hood:
Gently rotate it 60° counter-clockwise, as shown, and remove.
To attach the lens hood:
Gently rotate it 60° clockwise until it clicks into place.

- When using a filter, attach the lens hood in front of the filter so that the lens cap can be replaced.

Adjusting Grip Belt 24-C

Tighten or loosen grip belt as necessary for a comfortable fit. Hold grip with your right hand while adjusting grip belt with your left.

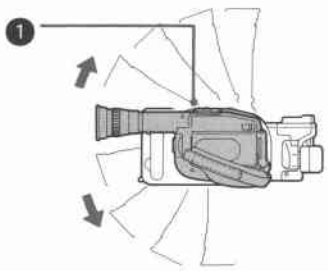
25-A



Adjusting Dioptre 25-A

Adjust the dioptre to individual eyesight correction when using the camera for the first time, when changing camera operators, or when changing eye distance from the finder.
To adjust dioptre:
Turn the camera on and turn dioptre adjustment ring until viewfinder displays are clearly visible.

25-B



Adjusting 180° FlexiGrip with Integral Electronic Viewfinder 25-B

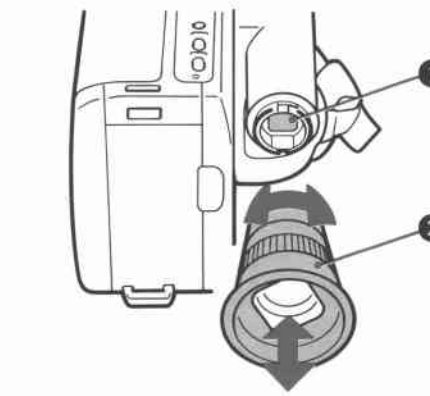
The 180° FlexiGrip allows you to adjust the camera angle to 9 click-positions (every 22.5°). Turn grip while pressing the GRIP UNLOCK button and release the button in the most convenient position for shooting.

1 GRIP UNLOCK Button

Note:

- The grip cannot be rotated when the optional RS-300 Rain Shield is used. Use the camera with the grip set horizontally.

25-C



Sports Finder 25-C

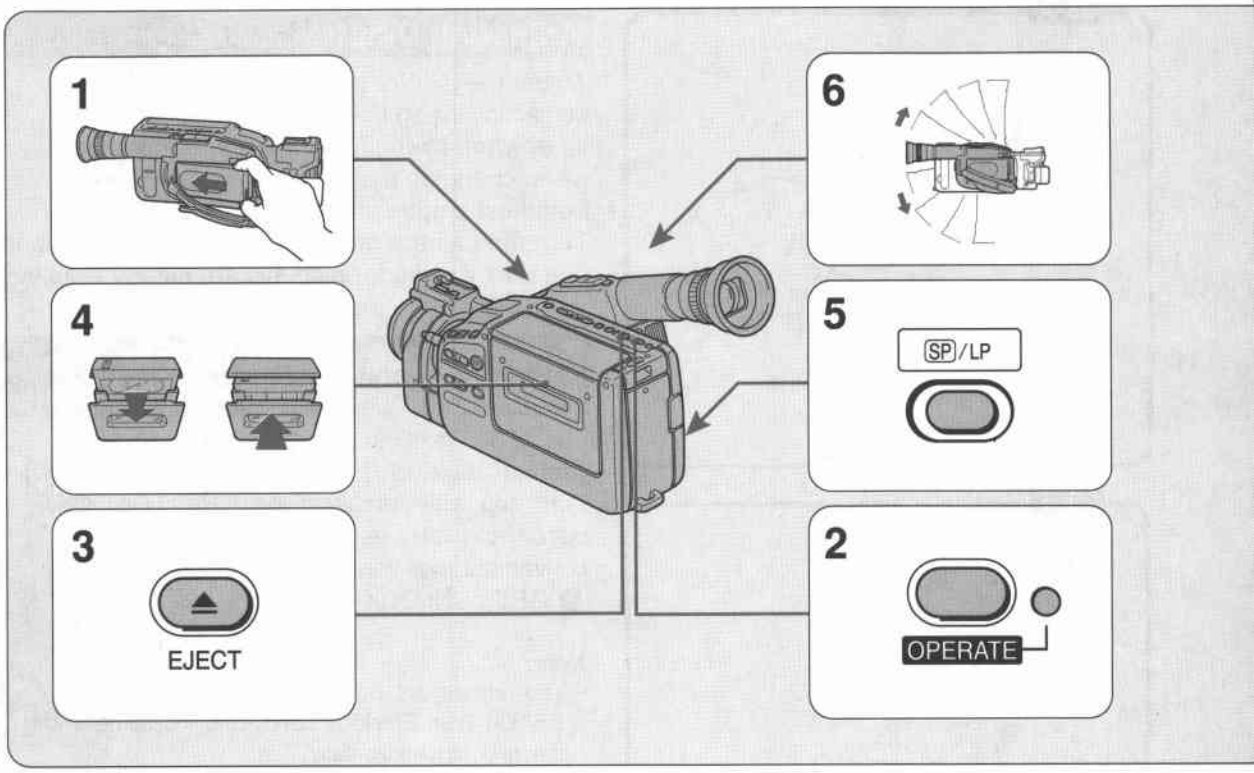
The sports finder allows you to monitor the viewfinder from as much as an arm's length from the camera.
To clean the viewfinder screen, remove the sports finder then use a commercially available blower brush.
To remove:
Align the triangular mark on finder with the mark on grip. Gently slide finder off.
To attach:
Slide finder onto grip aligning triangular mark on finder with the mark on grip. Turn finder clockwise to lock in place.

1 Viewfinder Display
2 Sports Finder

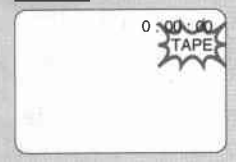
Note:

- Be sure to protect the viewfinder from direct sunlight, otherwise the viewfinder will melt.

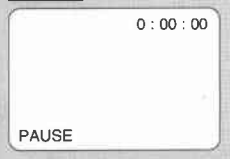
Camera Recording



26-A



26-B



1. Attach power source.
- When using a battery pack, make sure it is fully charged (see p. 15).

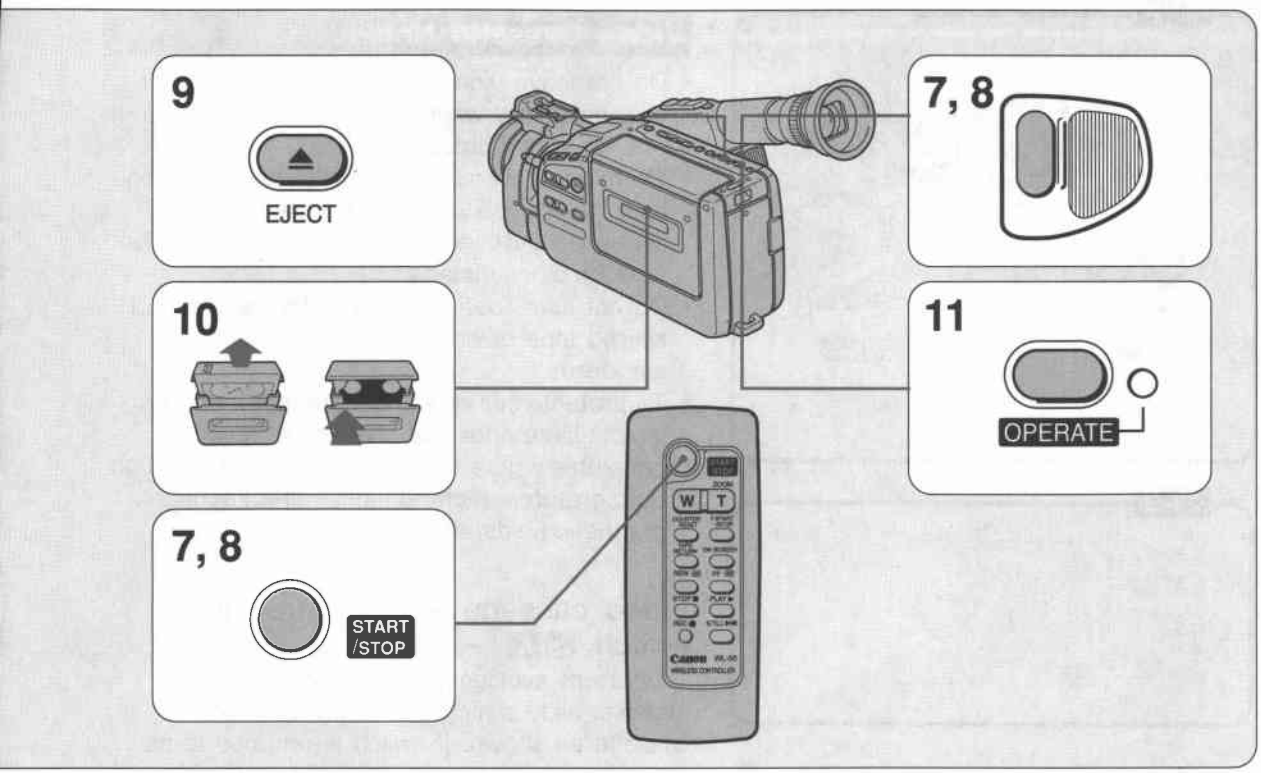
2. Turn camera on.
- OPERATE indicator lights up.
- "TAPE" flashes in viewfinder (see p. 30). 26-A

3. Press ▲ (EJECT) button.
- Video cassette compartment opens.
- EJECT button works with the power turned off, if the battery pack is attached.

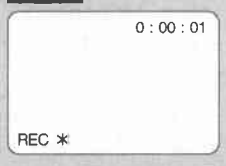
4. Load video cassette and close video cassette compartment.
- Press "PUSH" mark on video cassette compartment until a click sound is heard.
- Use an 8mm video cassette marked with an 8 (P5 type).
- Camera goes into record pause mode. 26-B

5. Press SP/LP button to select tape mode.
- For best picture quality, select SP.
- For double recording time, select LP.

6. Turn grip to desired position.
- See p. 25 for adjusting grip.



27-A



27-B

7. Press start/stop button.

- Recording starts and "REC" appears in viewfinder. 27-A
- Tally lamp flashes rapidly.
- See page 31-54 for information on making your recordings more effective.

8. Press start/stop button again to temporarily pause recording. 27-B

- Press start/stop button once again to resume recording.
- See "Record Review" (p. 32) to check your recording.

9. When recording has ended, press ▲ (EJECT) button.

- Video cassette compartment opens.

10. Remove video cassette and close video cassette compartment again.

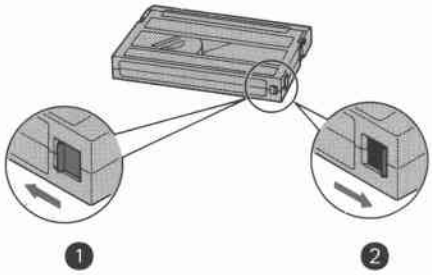
11. Turn camera off.

- OPERATE indicator goes off.

Notes:

- The tape counter will be reset to 0:00:00 each time a video cassette is loaded.
- The camera automatically turns off if record pause mode lasts more than approximately 7 minutes. To resume recording turn camera on and press start/stop button.
- For security, check the viewfinder display for correct mode during shooting.
- Avoid recording near sources of electric or magnetic fields, such as a TV tower, which can cause noise in the picture or a camera malfunction.
- If tape speed is changed during recording, the tape will contain noise at that point.

28-A



28-B

Video Cassette Notes

- Do not leave video cassette in camera after use, especially when the camera will not be in use for a long time.
- There are several holes on the video cassette back, which are used for transferring information. Do not cover them with adhesive tape or other materials.
- Do not use video cassettes with damaged or spliced tape or ones that do not meet standards.
- To protect your video cassette put it in the plastic case after use. Do not store video cassettes where they may be exposed to high temperatures, high humidity, direct sunlight, magnetic fields, dust or mould.

Video cassette erasure prevention switch 28-A

To prevent accidental erasure of recorded material, slide switch at bottom of video cassette as shown. If switch is returned to its original position, recording is possible once again.

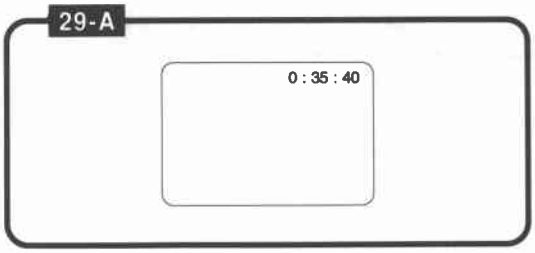
Refer to video cassette instruction manual for more information about erasure prevention.

- When you load a video cassette that is set for erasure prevention, the camcorder will be placed in playback mode automatically. 28-B Use another video cassette or set switch to enable recording.

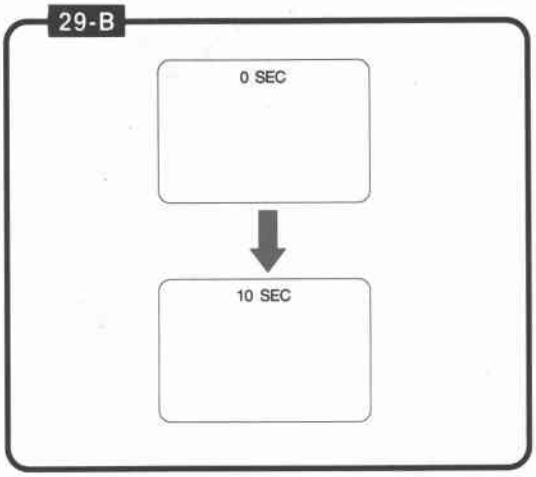
❶ To save: Erasure Prevention

❷ To record: Recording Possible

29-A



29-B



Tape Counter

During recording, the tape counter in the viewfinder indicates how long you have recorded.
In the case shown in the diagram, you have recorded for approximately 35 minutes and 40 seconds (in SP mode). 29-A

- The tape counter is reset to 0:00:00 when you press the C. RESET button, or each time you load a video cassette.
- The tape counter also appears during playback and record search, so you can use it to verify how long the tape has run.
- Tape counter time and actual recording length may be slightly different. Use the tape counter only as an approximate guide.
- When recording in LP mode, actual recording length is approximately twice the tape counter time.

Recording Reminder

When you start to record, the camera counts off the first 10 seconds of your recording and displays "0 SEC" through "10 SEC" in the viewfinder. This function is designed to help you make sure your scenes aren't too short, for easy viewing and editing. Try to record for at least the full 10 seconds. 29-B

- Recording reminder time and actual recording length may be slightly different. Use recording reminder only as an approximate guide.

30-A

30-B

30-C

Video Cassette Warning 30-A

- "T. END" appears in viewfinder when tape is completely used up.
- "TAPE" flashes in viewfinder if camera is turned on and a video cassette is not loaded.

Battery Pack Warning 30-B

- "BATT" flashes in viewfinder when battery pack is nearly exhausted.
- If the camera is turned on with an exhausted battery pack attached, it may turn off immediately, without a "BATT" warning.

Recording Using Tripod 30-C

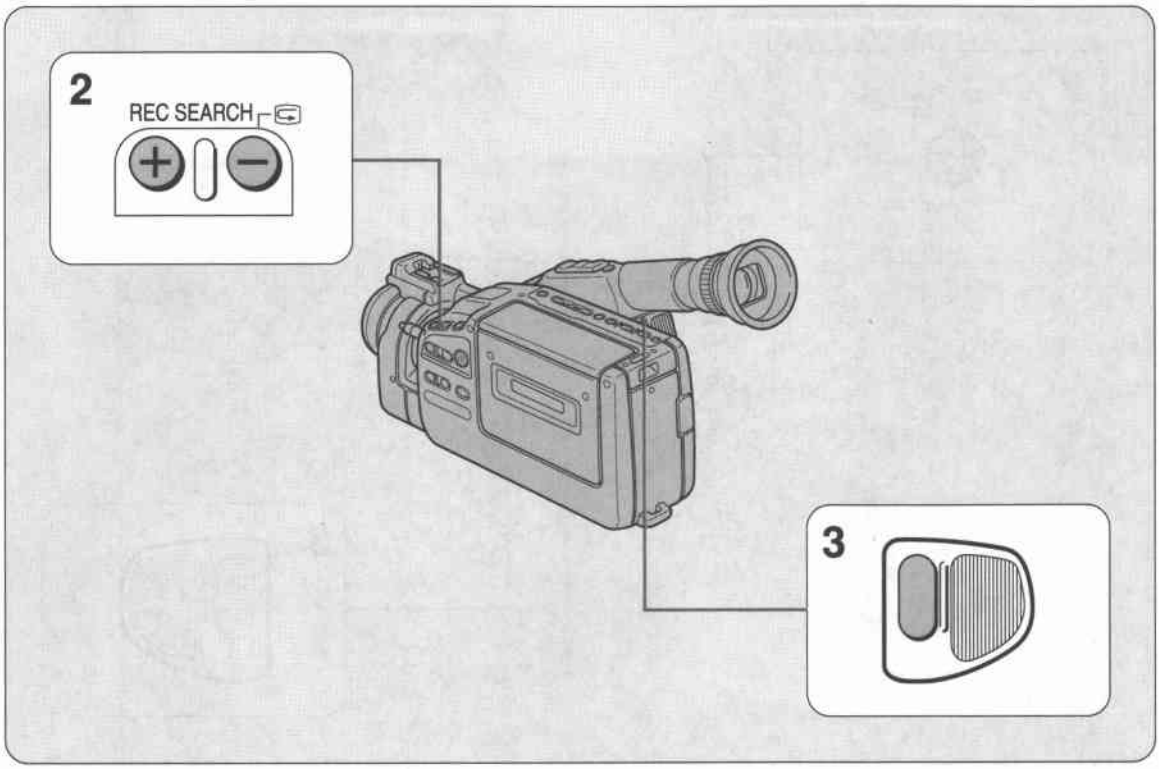
Use a tripod especially in the following cases:

- Telephoto recording
- Macro recording
- Recording using wireless controller

Note:

- Be sure to protect the viewfinder from direct sunlight, otherwise the viewfinder will melt.

Record Search



31-A

31-B

Use record search to locate the desired point to resume recording. Record search can also be used to eliminate noise between recorded scenes. Use this function when you make additional recordings on a previously used video cassette — there will be no noise between a previously recorded scene and a newly recorded scene.

1. Place camera in record pause mode. 31-A

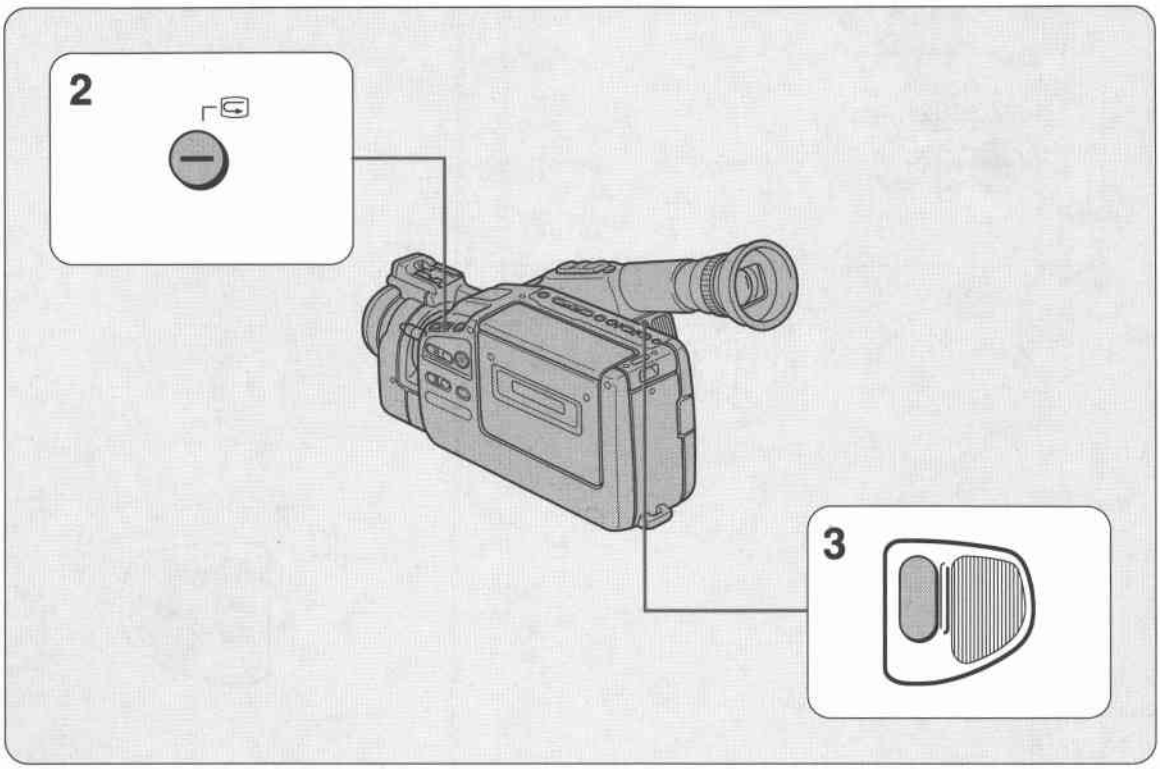
2. Press REC SEARCH + or – button to scroll forward or backward to locate recording start position.

- Press and hold the + button to play back the recording forward.
- Press and hold the – button to play back the recording backward.
- Camera returns to record pause mode when you release the buttons.

3. Press start/stop button.

- Recording starts. 31-B
- Tally lamp flashes rapidly.

Record Review



32-A

Press ⟲ (Record Review) button during record pause mode to play back the last segment of recorded scene (approximately 3 seconds) in the viewfinder. Once playback is complete, the camera returns to record pause mode where it left off.

1. Place camera in record pause mode. 32-A

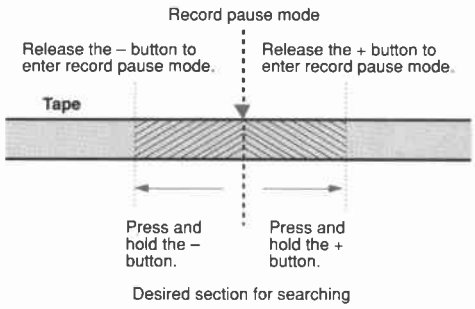
2. Press ⟲ button.

- Scene plays back in viewfinder.
- Camera returns to record pause mode after record review has ended.

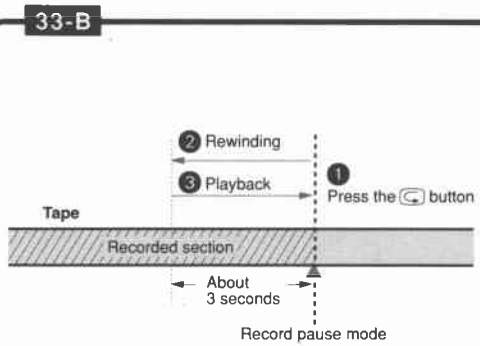
3. Press start/stop button to resume recording.

- Tally lamp flashes rapidly.

33-A


Record pause mode
Release the – button to enter record pause mode.
Release the + button to enter record pause mode.
Tape
Press and hold the – button.
Press and hold the + button.
Desired section for searching

33-B



Explanation:

Record search (to resume recording) 33-A

Searches the desired section to start recording, while in record pause mode.

Explanation:

Record review 33-B

Plays back your recording in the order ❶ to ❸ after record pause mode is entered. The camera returns to record pause mode after playback has ended.

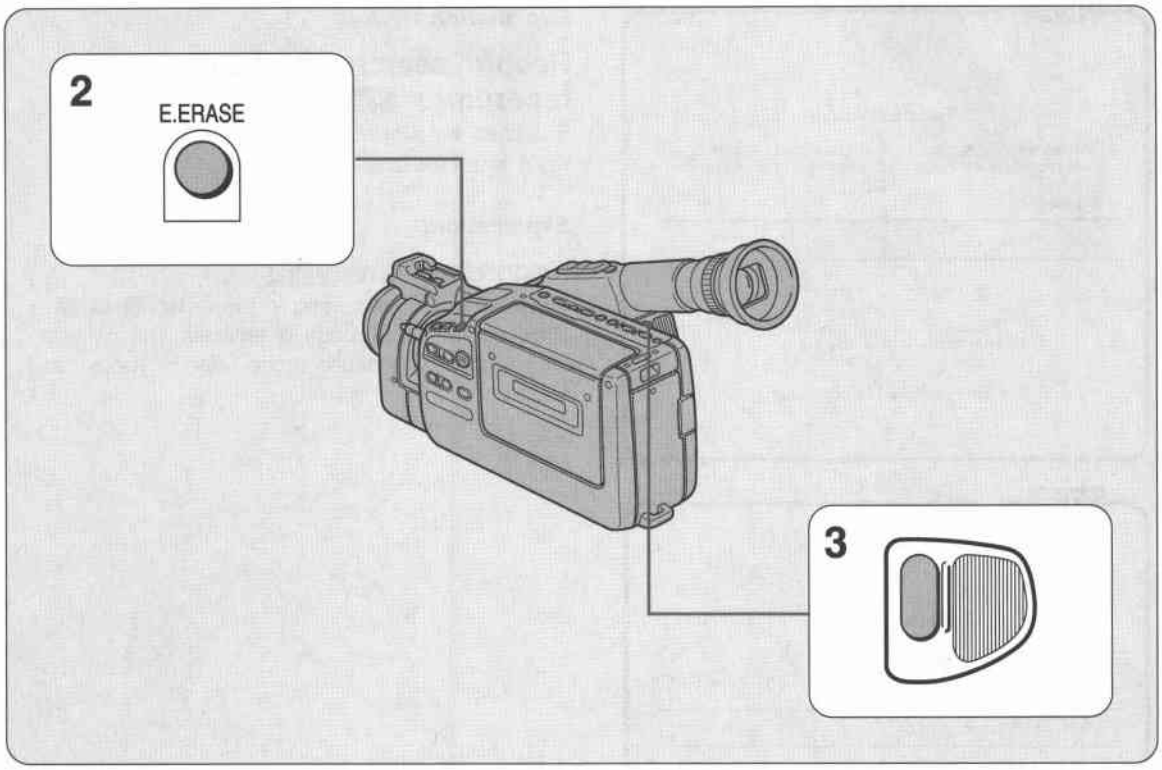
33-C

33-D

Notes:

- Noise 33-C or skew 33-D may appear on the screen during record review mode or record search mode. This is not a malfunction.
- During record review no other operation works. However, if the OPERATE button is pressed, the power turns off.

Edit-erase



34-A

PAUSE ✳

When an undesirable object or sound is recorded, such as someone walking across the picture or the sound of a car horn, the edit-erase function can be used to quickly return to the precise point where recording began, and record the scene again. This function only operates during the first 40 seconds or so of recording.

For about 40 seconds after starting to shoot a scene a ✳ (asterisk) mark appears in the viewfinder next to the tape operations display. The edit-erase function can be used while this ✳ mark is displayed.

1. Make sure that ✳ (asterisk) is displayed, then place camera in record pause mode. 34-A

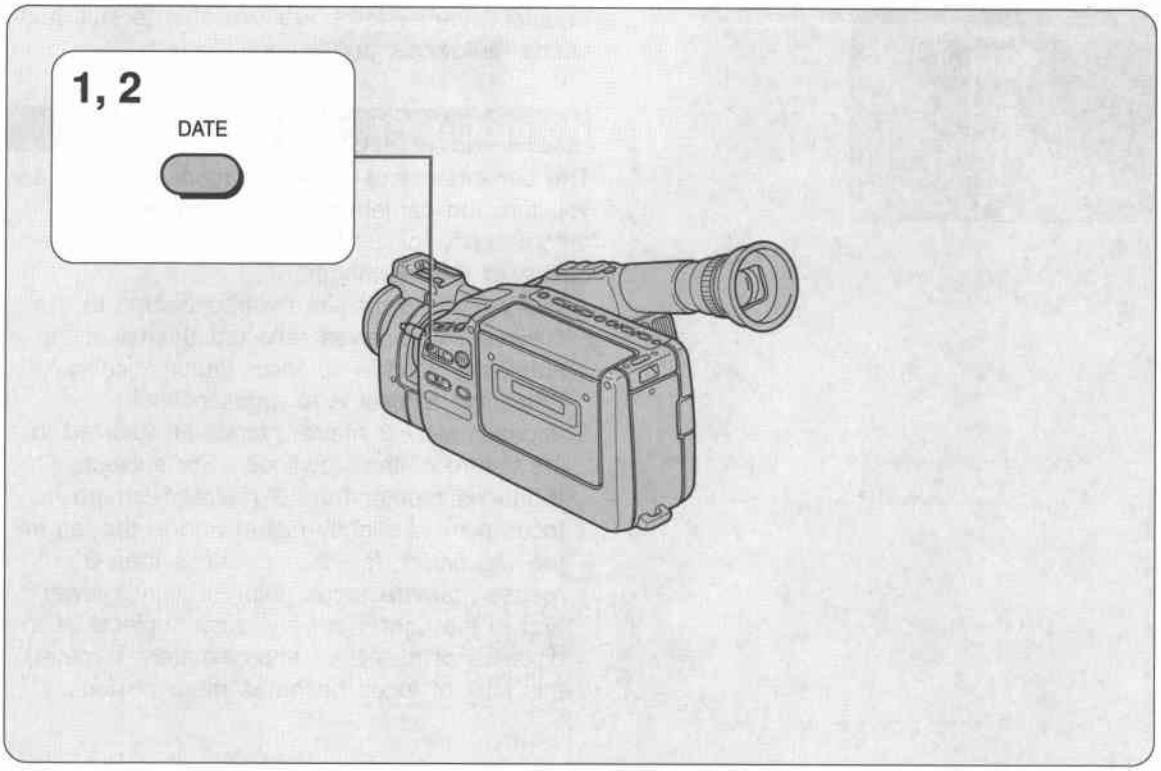
2. Press E. ERASE button.

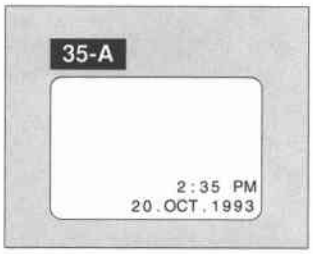
- Tape is rewound to recording start point at 3 times normal speed, and recorded picture is displayed (in reverse) in viewfinder. Camera returns automatically to record pause mode at the start of scene you want to record over.
- Asterisk disappears from viewfinder.

3. Press start/stop button to resume recording.

- Previously recorded scene is erased.

Recording Date and Time





1. **While recording or in record pause mode, press DATE button.** 35-A
   - Date and time appear in viewfinder and are recorded with scene.
   - Date and time can also be recorded with title.
2. **Press DATE button again to end date and time recording.**

Note:

- When lithium battery is nearly or completely exhausted "DATE" flashes in viewfinder. Change lithium battery (see p. 18).

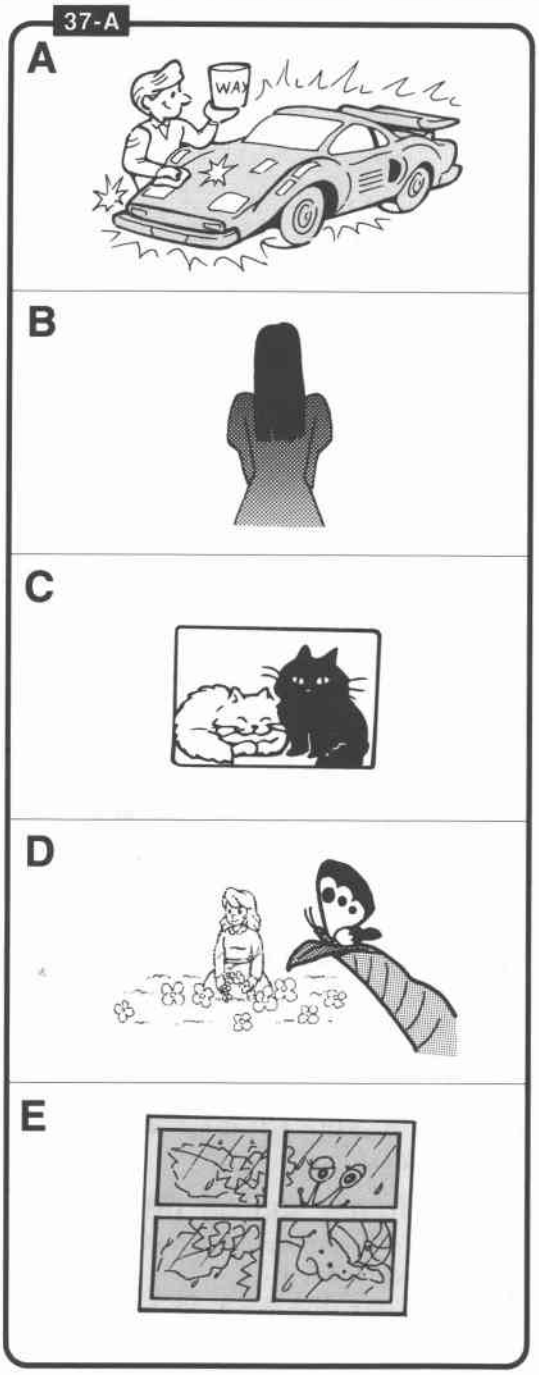
Focusing

Two focusing systems are available to suit your needs: autofocus and manual focus.

Autofocus

The camera enters autofocus mode as soon as you turn the camera on. Focus adjusts automatically to suit the subject located in the centre of the viewfinder.

- The camera transmits infrared beams to the subject and receives reflected beams at the autofocus window to focus automatically. When the subject is at a distance of approximately 3 metres, focus is adjusted in the centre of the viewfinder. For subject distances greater than 3 metres, camera focus point is slightly higher and to the left in the viewfinder; for distances less than 3 metres, camera focus point is slightly lower and to the right. For very close subjects at a distance of less than approximately 1 metre, this shift of focus becomes more obvious.



Subjects Not Suitable for Autofocus

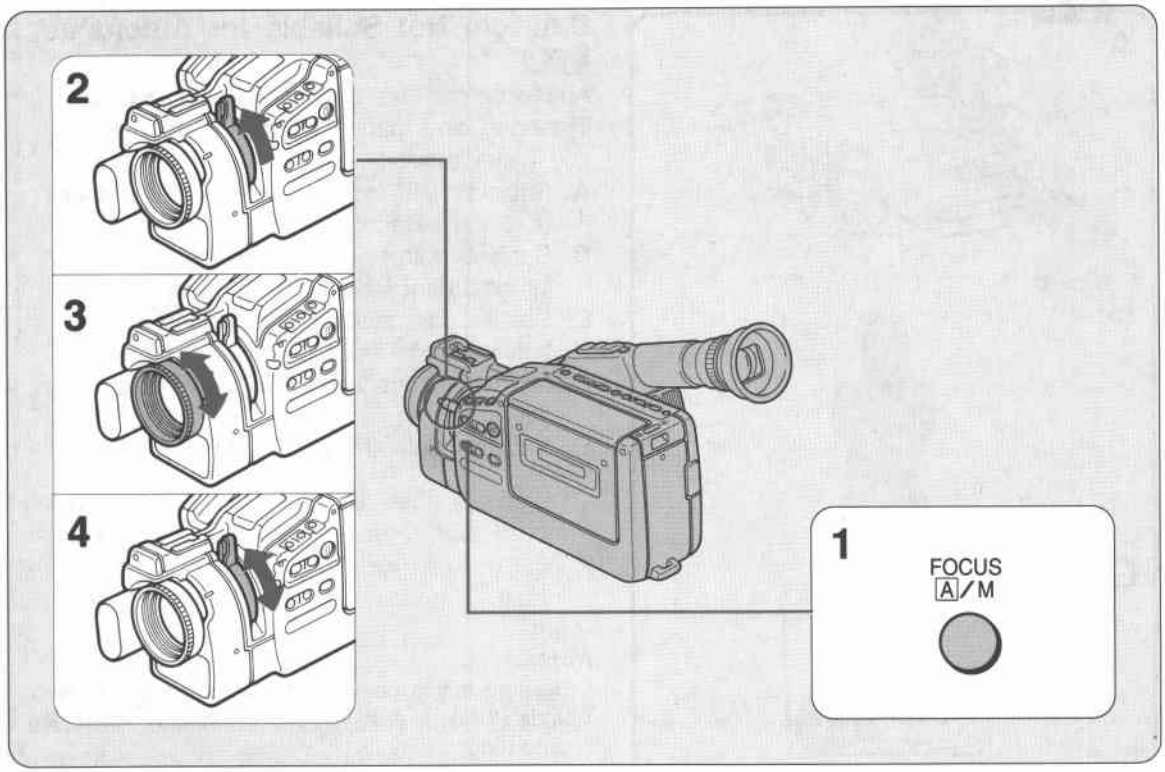
37-A

Autofocus may not work well in the following instances, and manual focus will probably give you better results:

A. Subjects with very glossy or shiny surfaces (e.g. car exteriors)
B. Subjects with little or no reflection (e.g. dark clothes, dark hair, water surface)
C. Scenes that cause a strong contrast between right and left halves of the screen
D. More than one subject in viewfinder/different distances
E. Subjects behind glass

Notes:

- Be sure not to obscure autofocus window located under the lens with your hand, fingers, etc. during recording.
- Do not touch focusing ring during autofocus.
- The autofocus mechanism focuses subjects at a distance of approximately 0.6–10 metres. For more distant subjects, focus locks at infinity. To shoot bright subjects at a distance of 10 metres or more outdoors during daytime, the lens aperture is small so accurate focus is easily achieved. However, if conditions are cloudy or if you are shooting night scenes, etc., use manual focusing.
- If the camera is near other products that use infrared beams (e.g. wireless controller for TV, VCR, or another video camcorder), autofocus may malfunction. Autofocus is turned off when the camera receives signals from the wireless controller.
- Shooting subjects in low-light conditions at a distance of less than 1 metre in autofocus mode may result in poor picture quality. To avoid this use the VL-7 Battery Video Light.



38-A

M. FOCUS

Manual Focus

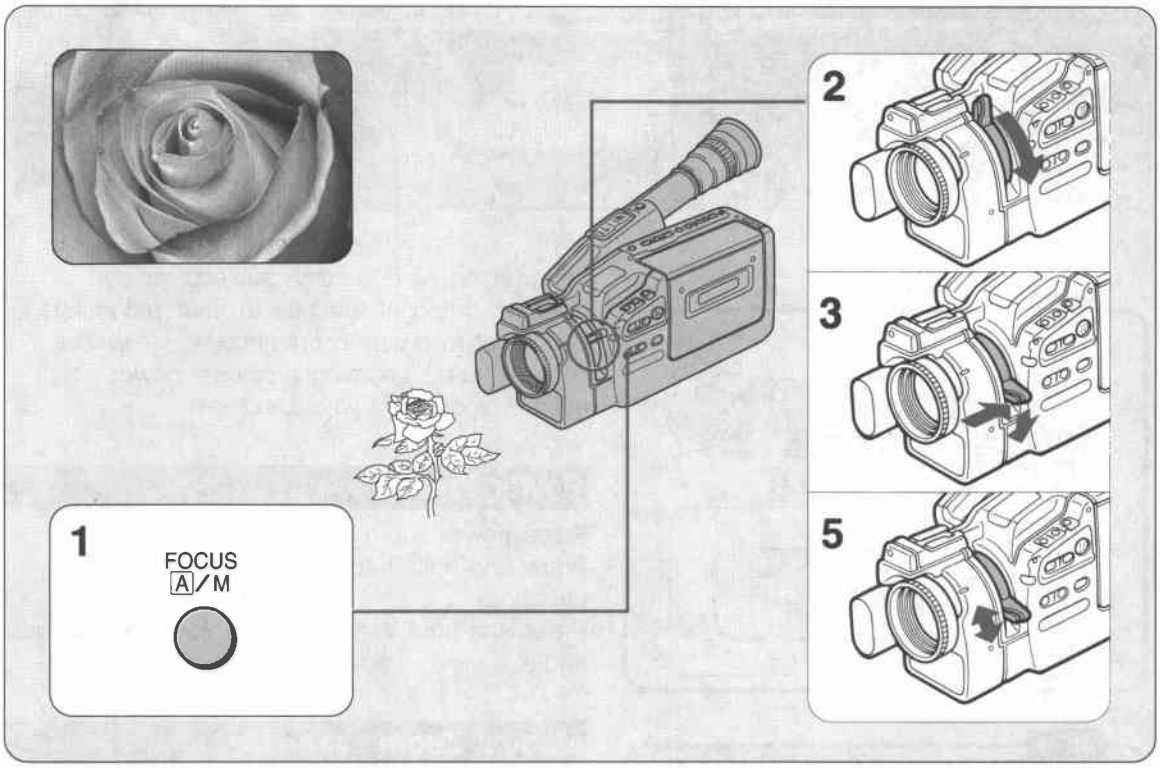
Use manual focus when you shoot subjects not suitable for autofocus.

1. **Press FOCUS A/M button to select manual focus.**
   - "M. FOCUS" appears in viewfinder. 38-A
2. **Rotate zooming lever to telephoto end.**
3. **Look through viewfinder and rotate focusing ring to focus on subject.**
4. **Use zooming lever to frame subject properly.**
   - Camera automatically returns to autofocus when camera is turned off or placed in playback mode.
   - Press FOCUS A/M button to stop manual focus and return to autofocus ("M. FOCUS" disappears from viewfinder).

Focus Lock

When you press the FOCUS A/M button during autofocus, the focus can be locked on the subject focused at that time, even if the subject moves to the right or left of centre. To focus on another subject, adjust with the focusing ring or press the FOCUS A/M button again and adjust with autofocus.

Macro Recording



Macro recording allows you to record small subjects such as flowers and insects close-up, to full screen, and achieve extremely fine detail in your pictures.

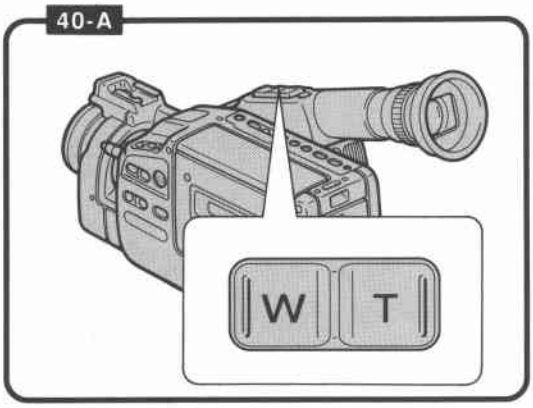
1. **Press FOCUS A/M button to select manual focus.**
   - "M. FOCUS" appears in viewfinder. 39-A
2. **Rotate zooming lever to wide-angle end.**
3. **Press and hold macro button on zooming lever and move lever into macro range.**
4. **Approach subject until it reaches desired size in viewfinder.**
   - Be sure there is adequate lighting.
   - You can approach the subject as close as 4 mm.
5. **Use zooming lever within macro range for fine focusing.**
6. **When macro recording is completed, reverse steps 2 and 3.**

Notes:

- Move camera forward or backward slightly to change subject image size and then fine focus again.
- A tripod is recommended for better recording stability.
- If necessary, remove the lens hood (see p. 24).

Zooming

40-A

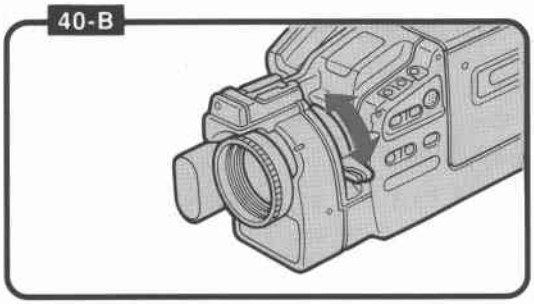


Zoom in on hard-to-catch subjects or add close-up personal touches to your recordings. Zoom out to reveal a breathtaking view. The camera has 3 zooming methods: power zoom, manual zoom and wireless zoom.

Power Zoom 40-A

Press power zoom buttons on the grip.
Press and hold T to gradually zoom in to telephoto.
Press and hold W to gradually zoom out to wide angle.

40-B



Manual Zoom 40-B

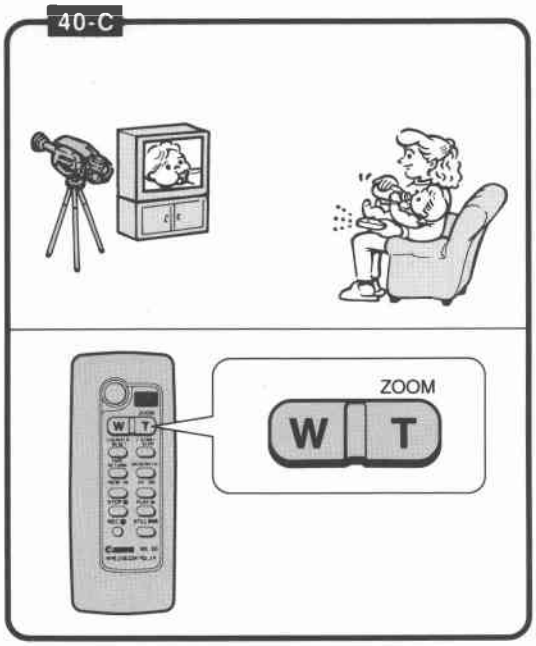
Turn zooming lever to rotate zooming ring.

Wireless Zoom 40-C

The wireless controller allows you to control zoom operation from a distance.
Press and hold ZOOM T button to gradually zoom in to telephoto.
Press and hold ZOOM W button to gradually zoom out to wide angle.

- Mount camera on a tripod.
- Use a TV monitor during wireless zooming to view shots.

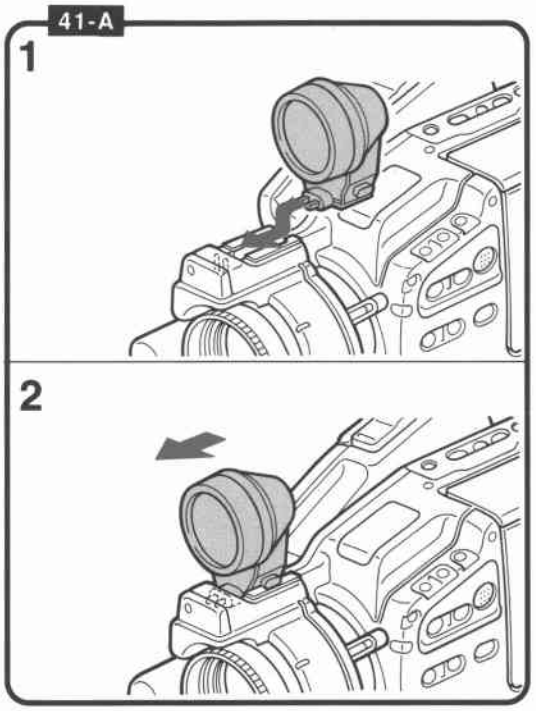
40-C

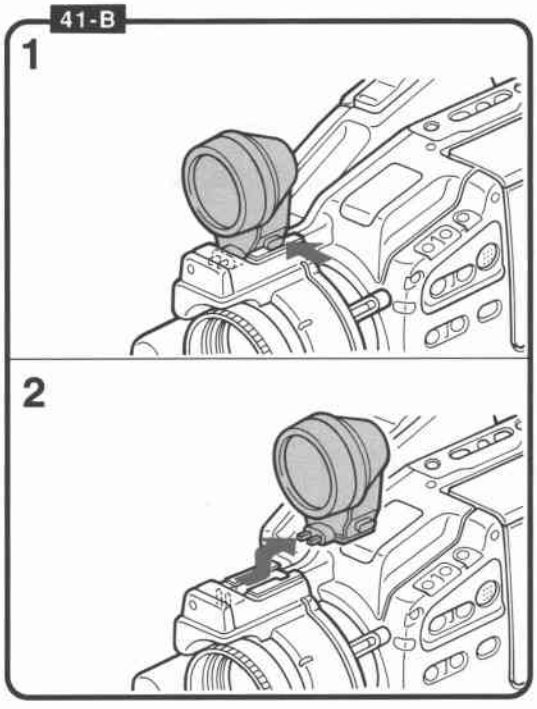


Notes:

- Even the slightest hand movement will appear in the recording when shooting in the telephoto range. Use a tripod for better results.
- Overuse of zooming may make recordings seem too busy. Selective use of zooming is more effective.

Shooting with Video Light





When shooting with backlighting or in a dark room, use the VL-7 Battery Video Light, which is powered by the battery pack mounted on camera body.

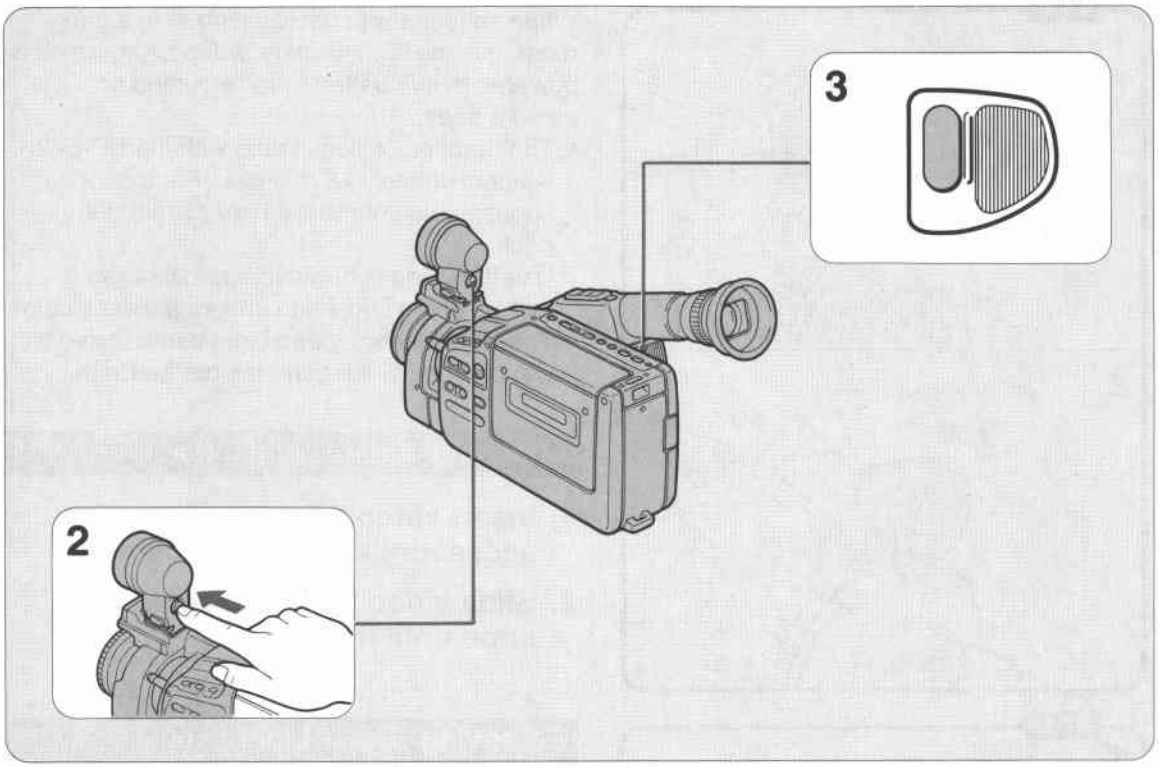
- The duration of illumination with the BP-E77K is approximately 15 minutes. For longer shooting, be sure to have an extra battery pack.
- Use the video light within approximately 3 metres of the subject to ensure a clear picture.
- The VL-7 Battery Video Light can be used with Canon 8mm video cameras marked with DC 6V ⎓ +/−.

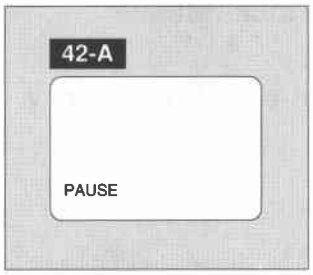
Attaching Video Light 41-A

1. **Insert video light plug into accessory shoe on the camera.**
2. **Slide video light into accessory shoe until it stops.**

Removing Video Light 41-B

1. **Press and hold lock release button.**
2. **Slide video light out of accessory shoe.**



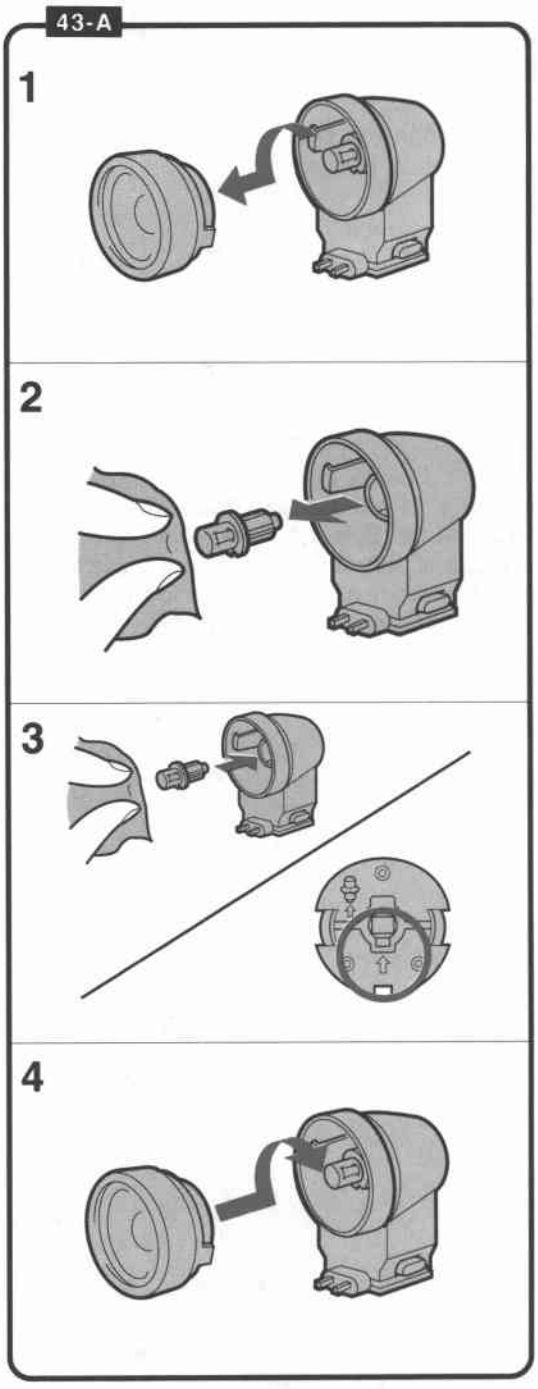


Shooting with Video Light

1. **Place camera in record pause mode.** 42-A
2. **Press video light power button.**
3. **Press start/stop button to start shooting.**
   - To turn off video light during shooting, press video light power button again.

Note:

- The video light can be used only during recording or record pause mode.



Replacing Bulb 43-A

Use only Canon Halogen Bulb MHL-5.7V 6W (accessory).

- Before replacing the bulb, turn the power off and allow sufficient time for the bulb to cool.
- Remove the video light from the camera before replacing the bulb.

1. Rotate the protector in the indicated direction.

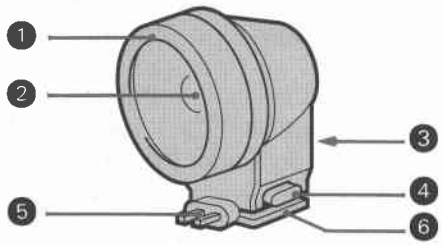
2. Pull out the old bulb.

3. Insert a new bulb positioning the notch at the bottom.

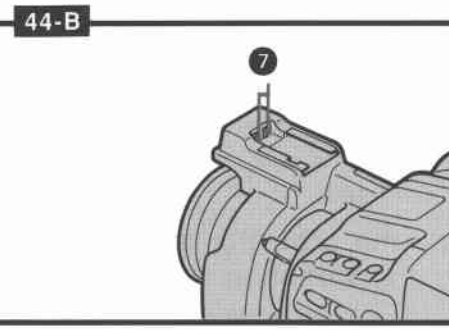
- Do not touch the new bulb or reflector with your bare hands.

4. Rotate the protector in the indicated direction.

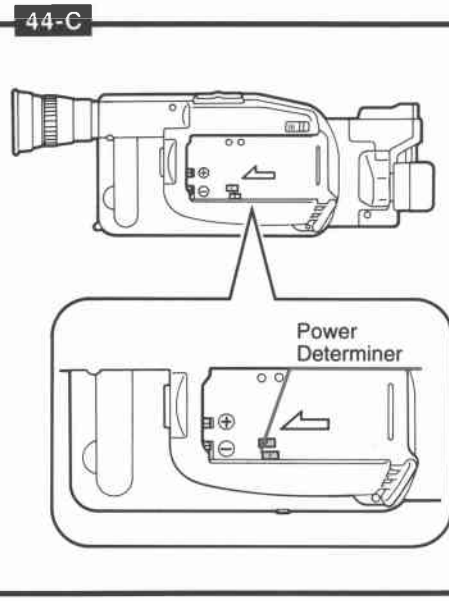
44-A



44-B



44-C



44-A
1. Protector
2. Halogen Bulb
3. Power Button (on back)
4. Lock Release Button
5. Plug
6. Shoe Attachment

44-B
7. Plug Receptacle

Caution

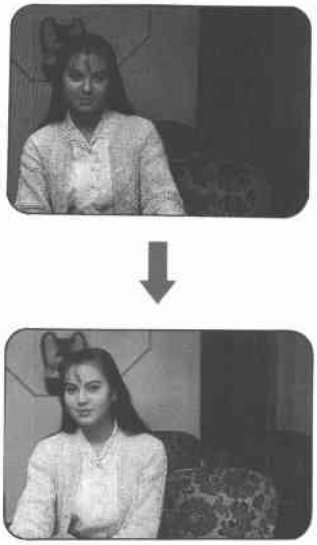
- Only use the battery pack with the video light. Do not use the CA-100 Compact Power Adapter or the CB-110 Car Battery Adapter. Also, do not place tape or adhesive over the power determiner (set to on), otherwise the power supply may overheat and cause a problem. 44-C

Notes:

- Be careful not to touch the bulb during or immediately after use; it becomes very hot. Keep the hot lamp away from flammable or plastic materials.
- Protect the video light from impact or vibration during use or the halogen lamp may burn out.
- Ensure that no foreign material such as a metal fragment, etc., is in the plug receptacle. Be careful not to deform the plug by using excessive force.
- When carrying the camera with the video light attached, be sure to support the camera body. Never carry the camera by holding the video light.

Gain-up/Backlight Compensation

45-A



45-B

The GAIN UP/BLC button is used for the following two functions. The camera will automatically select the appropriate function based on the lighting conditions.

Gain-up Function 45-A

The gain-up function lets you record more brightly than usual, especially for when you are recording in dimly lit places. Since gain-up relies on electronic image processing, the image quality will suffer somewhat.

Notes:

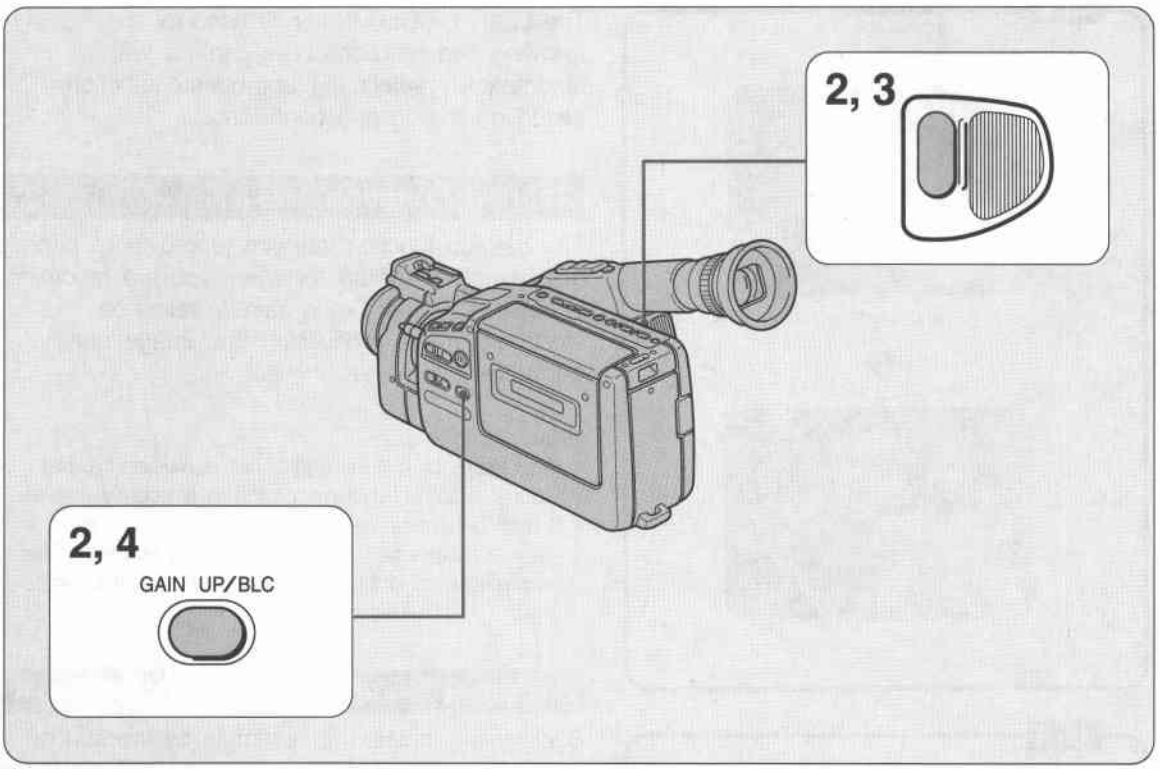
- With gain-up, picture quality will suffer somewhat. Cancel gain-up when recording in a brightly lit area.
- It may be impossible to record in extremely dark places, even when using the gain-up feature. When recording from only a short distance, use the video light.

Backlight Compensation Function 45-B

Backlighting, caused for example by the sun or an open window behind the subject, will make the subject appear underexposed and lacking in detail.
When the subject appears underexposed in the viewfinder use the backlight compensation (BLC) function.

Notes:

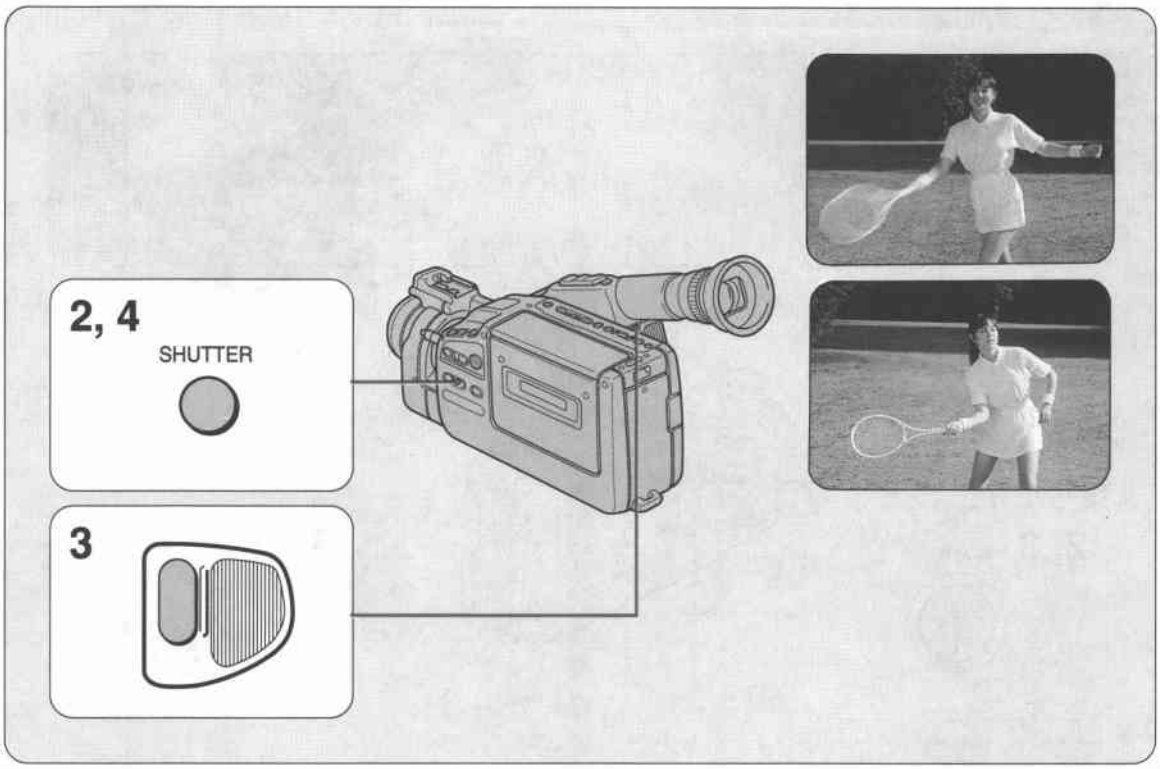
- If the picture angle is altered during backlight compensation, the exposure may become unsuitable. The image in the viewfinder should always be checked and compensation used only when the subject appears underexposed.
- If the subject still appears underexposed, use the video light.



Operation:

1. **Use zoom to set desired picture angle.**
   - See page 40 for zooming.
2. **Press start/stop button while holding down GAIN UP/BLC button.**
   - Gain-up/backlight compensation functions operate only while the GAIN UP/BLC button is being held down.
3. **When recording is complete, press start/stop button.**
4. **Release GAIN UP/BLC button.**

High-Speed Shutter

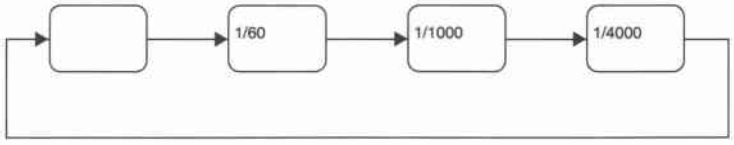


The high-speed shutter allows you to capture sports and other fast action scenes clearly. The camera has 3 high-speed shutter settings: 1/60th, 1/1000th and 1/4000th of a second. Select the correct shutter speed according to subject speed and brightness. Normal shutter speed is 1/50th of a second.

1. Point camera at subject and compose scene in viewfinder.

2. Press SHUTTER button.

- Each time button is pressed, viewfinder display changes as follows:



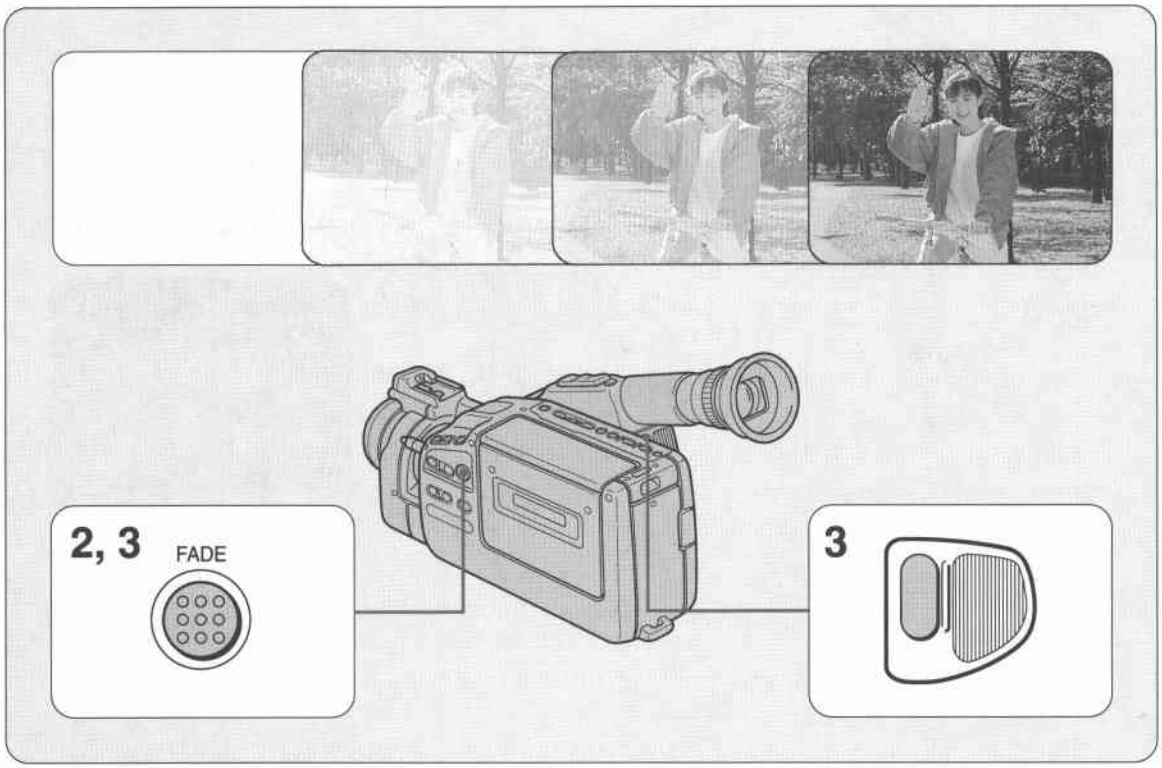
3. Make your recording.

4. Press SHUTTER button to return to normal shutter speed.

Notes:

- Use this function outdoors with bright light.
- Scenes shot with the high-speed shutter will appear somewhat jerky during normal playback.
- Scenes shot with the high-speed shutter work best with special playback. Use a VCR capable of noise-free special playback for best results.
- If camera is in playback mode, or is turned off, shutter setting automatically returns to normal (1/50).

Fade



48-A

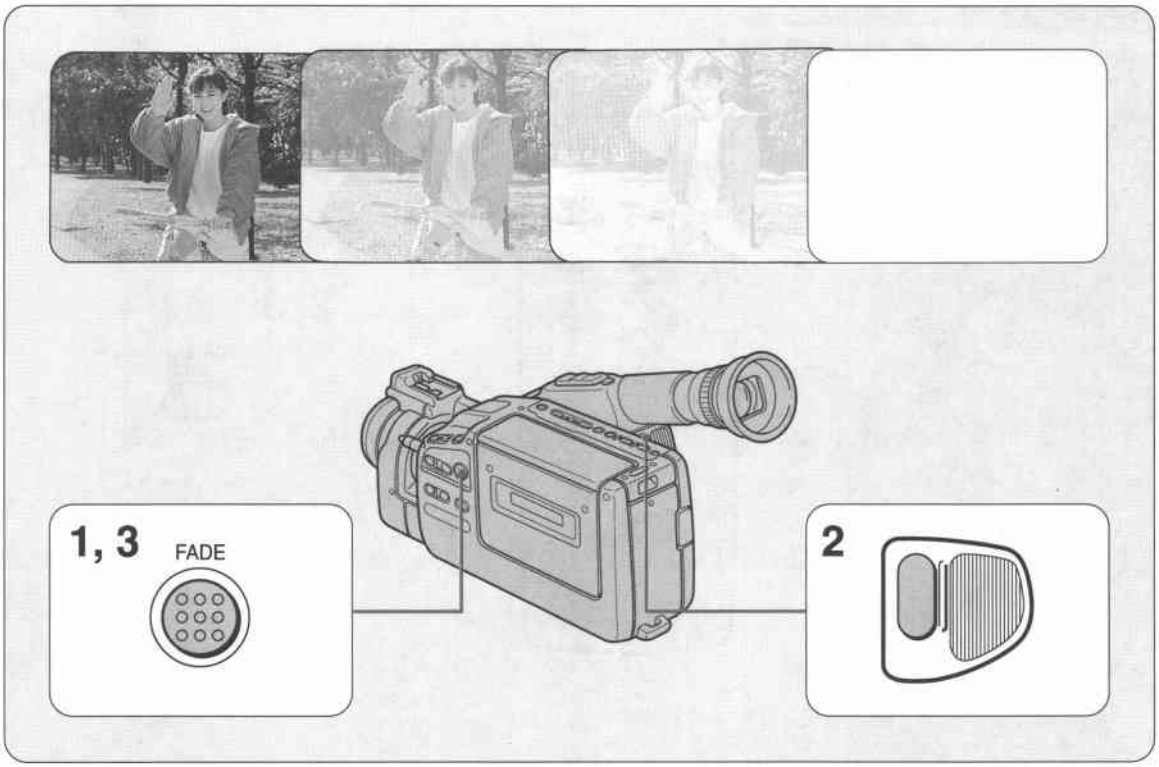
PAUSE

Fade effect allows you to make scenes gradually appear or disappear in smooth transition.

Fade In

Scene gradually appears from a blank white screen.

1. **Place camera in record pause mode.** 48-A
2. **Press and hold FADE button until scene disappears completely from viewfinder.**
3. **Press start/stop button to start recording and then release FADE button.**
   - Scene gradually fades in.



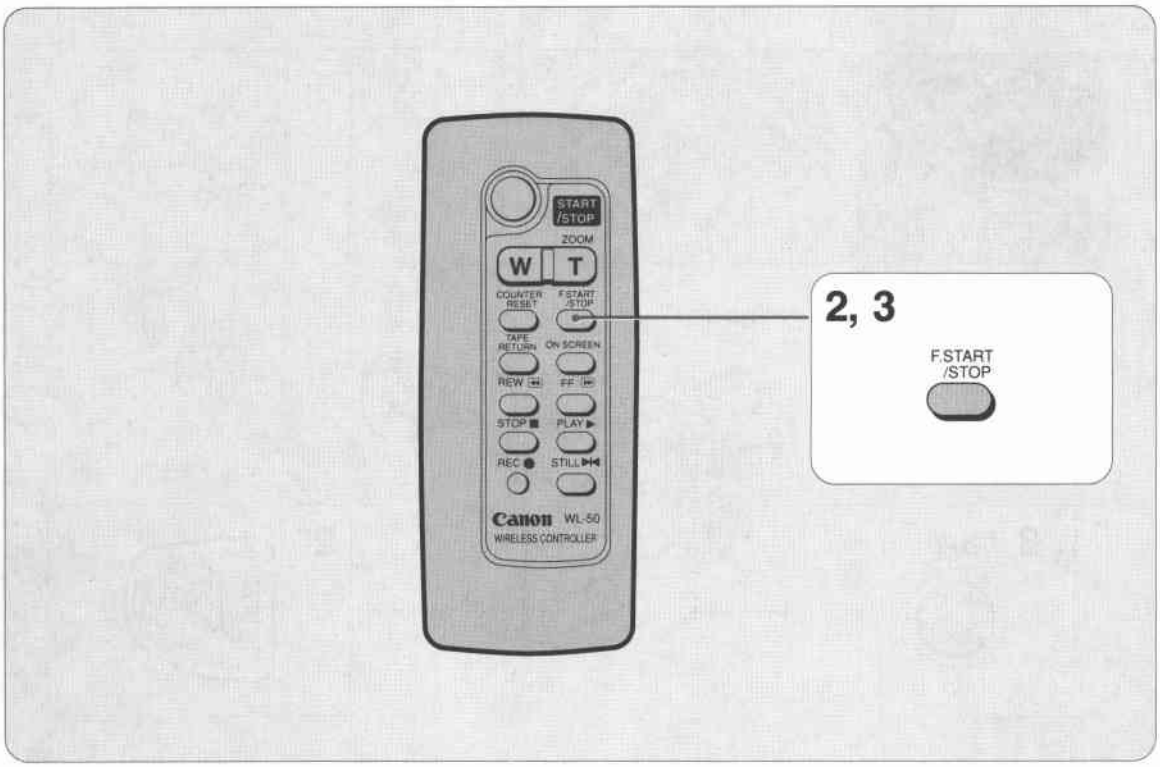
Fade Out

Scene gradually disappears, fading to a blank white screen.

1. **Press and hold FADE button during recording.**
   - Scene gradually fades out.
2. **Press start/stop button when scene has disappeared completely.**
   - Camera goes into record pause mode.
3. **Release FADE button.**

Notes:

- Sound fades along with the image.
- Title and date and time do not fade.
- Fade effect (except wireless fade) can be used at any time during recording.



50-A

PAUSE

Wireless Fade

Begin and end recording with a smooth fade in and fade out from a distance and without camera shake.

1. Place camera in record pause mode. 50-A

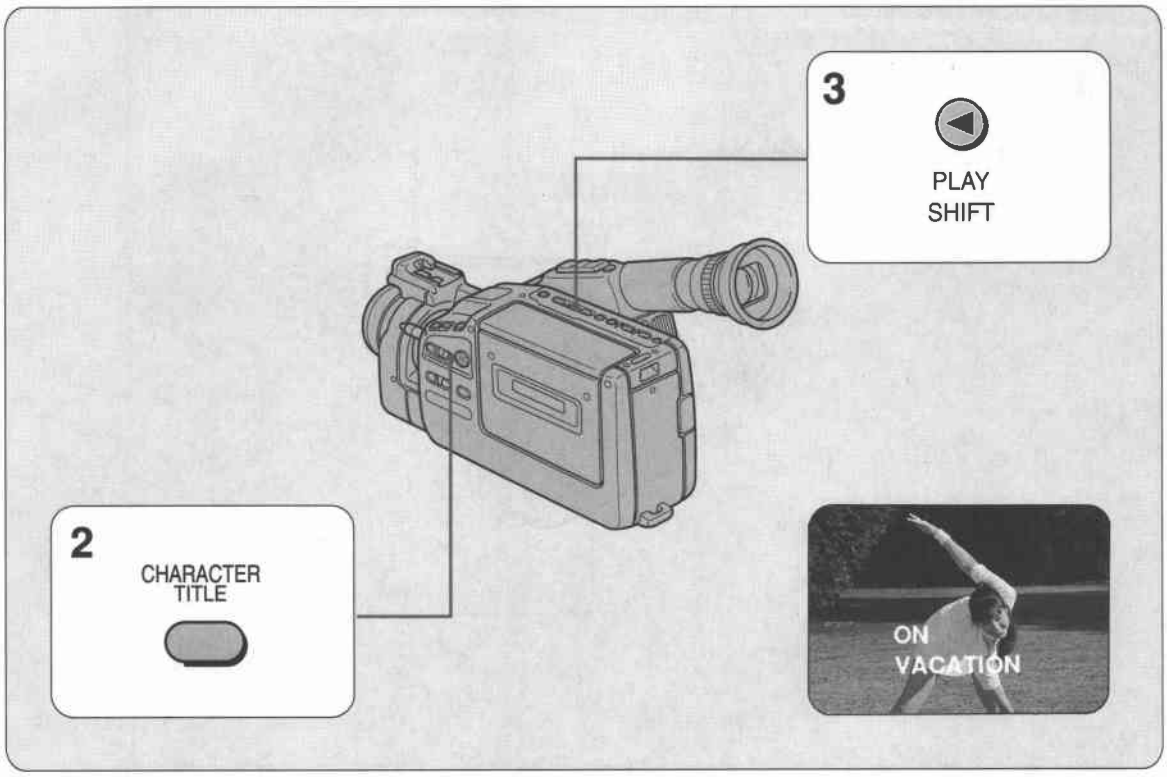
2. Press F. START/STOP button.

- Scene disappears, camera recording begins in about 1 or 2 seconds, and then picture fades in.

3. When scene is recorded, press F. START/STOP button again.

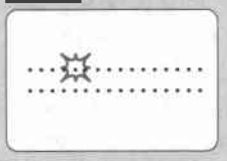
- Scene fades out, then camera enters record pause mode in about 4 seconds.

Adding Titles to Recordings



51-A

51-B



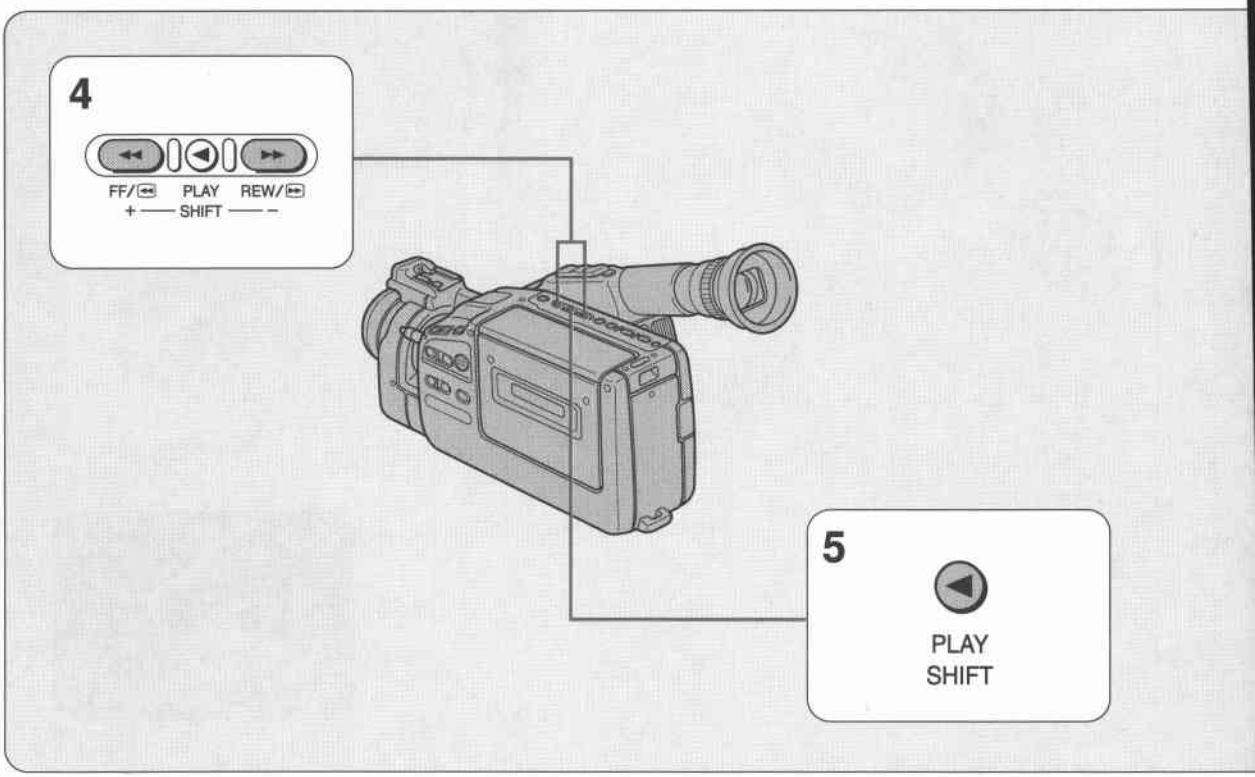
The camera allows you to create and store a character title which can be superimposed on recordings.

Creating Character Titles

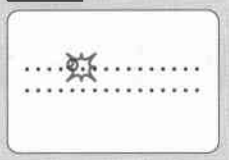
Remember to create your title before you start recording.
The title may be one or two lines of up to 16 characters each.

1. **Place camera in record pause.**
2. **Press CHARACTER TITLE button for more than 3 seconds to display title lines in viewfinder.**
   - A flashing dot or character indicates that the cursor is present. 51-A
3. **Press SHIFT button to move the cursor to position where you want to start the title.** 51-B
   - Press once to move cursor one space right.
   - Press and hold to move cursor continuously.
   - Cursor does not move backwards.

(continued on next page)



52-A



4. Use + and – buttons to scan list of title characters.

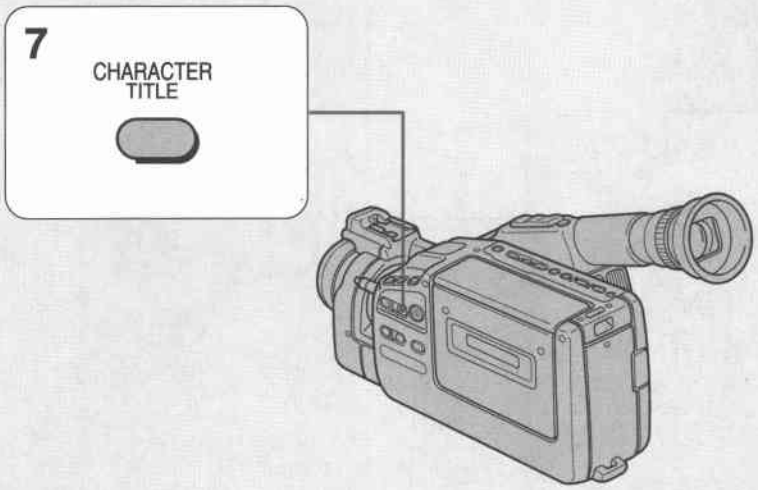
- Press + button to scan forward through the list.
- Press – button to scan the list in reverse order.
- Press once to scan characters one at a time.
- Press and hold to scan characters quickly.

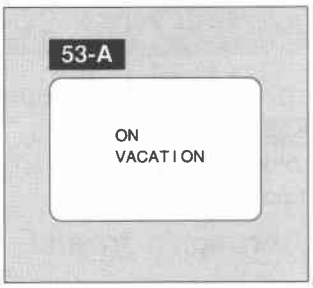
Title Characters List

→ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
□ & ∗ ! ? ; : " ' – / . , 9 8 7 6 5 4 3 2 1 0 □ Ë Ç Ñ Æ Å Ø Ü Ö Ä ←

- If you select □, a flashing dot appears in the viewfinder, but a space will appear during actual recording and playback.
- Press C. RESET button to erase all characters at and to right of cursor.

5. When the character you want is displayed, press SHIFT button again to move to next cursor position. 52-A





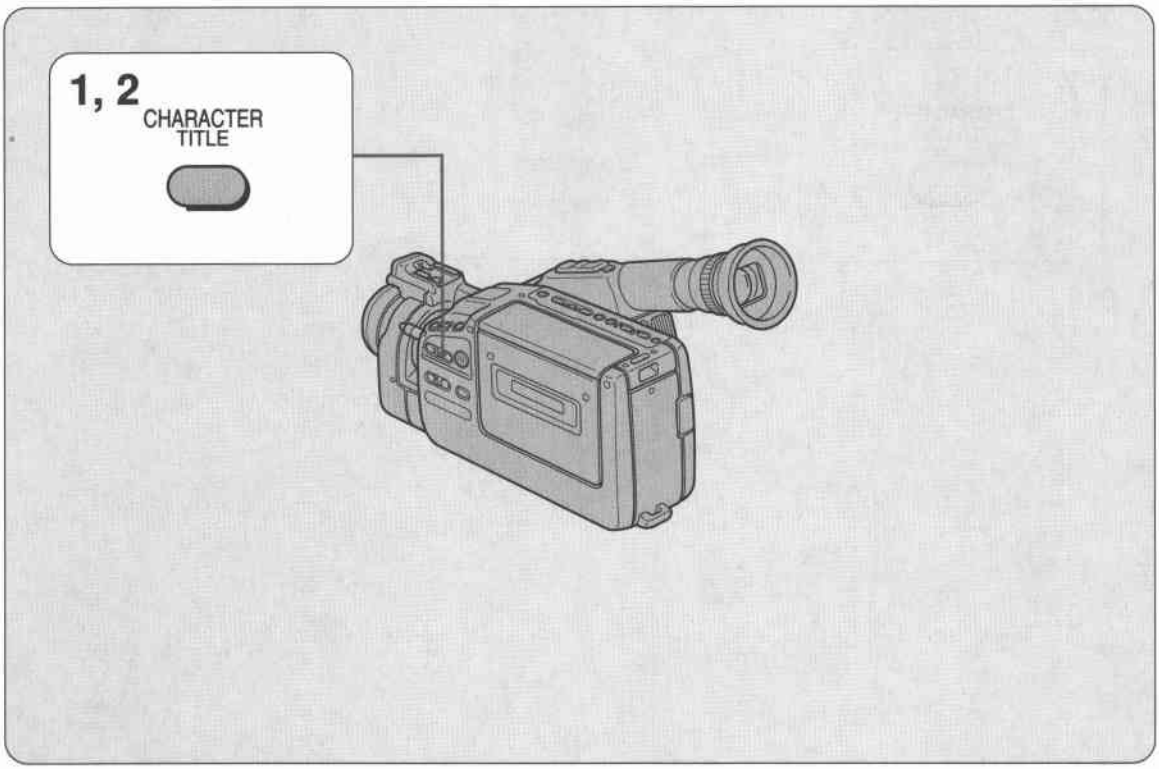
6. Follow steps 4 and 5 until your title is complete.

7. When the title is finished, press CHARACTER TITLE button. 53-A

- Title is saved in camera's memory.
- Press CHARACTER TITLE button again to make title disappear from viewfinder.

Notes:

- Title cannot be created during recording or playback mode.
- If you change or remove the lithium battery without a power source attached, the character title is cleared from memory.



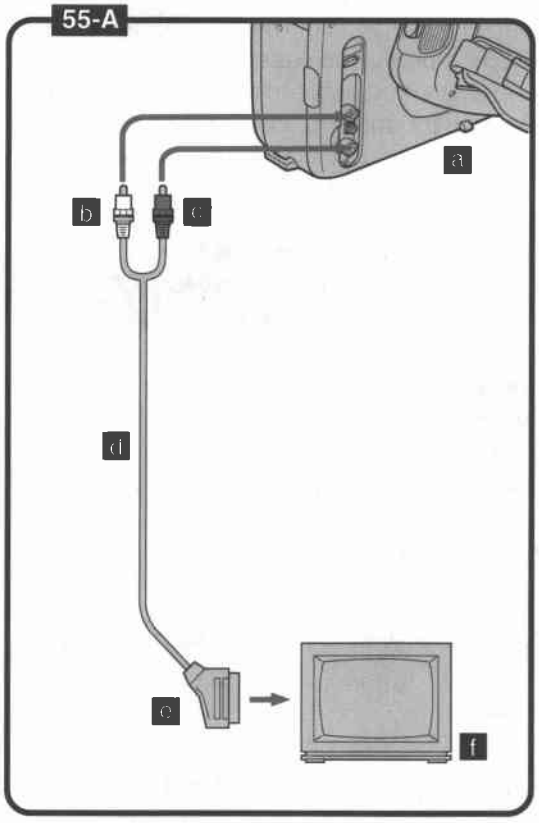
54-A

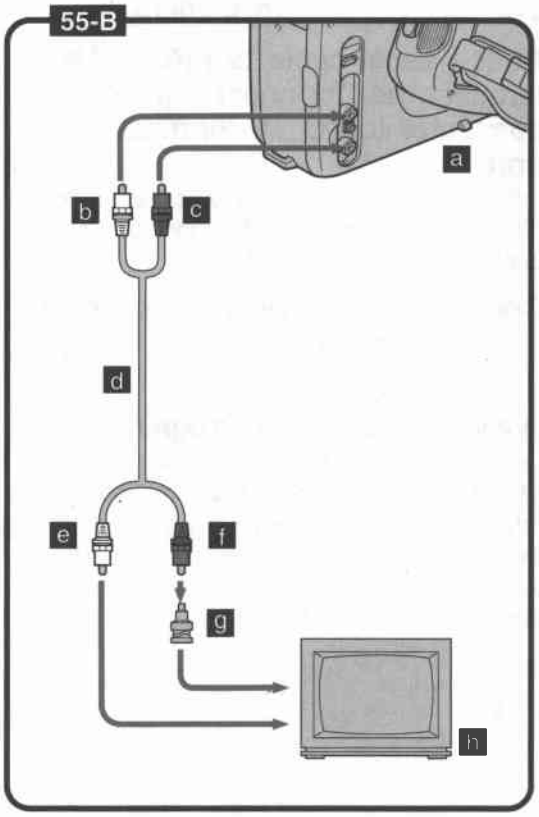
ON
VACATION

Recording Titles

1. **While recording or in record pause mode, press CHARACTER TITLE button.** 54-A
   - Title appears in viewfinder and is recorded with scene.
   - Title can also be recorded with date and time.
2. **Press CHARACTER TITLE button again to end title recording.**

Playback Connection





- For connecting accessories supplied with your camera see page 3.

To play back a video cassette on a TV, use the DC-100 DC Coupler together with the CA-100 Compact Power Adapter (or the optional CB-110 Car Battery Adapter) or the BP-E77K Battery Pack as a power source.

- Playback connection depends on whether or not the TV is equipped audio/video input terminals or SCART terminal.

Using TV with SCART Terminal

Connection Procedure 55-A

You need the PC-150 SCART Cable and a power source for playback on a TV that has SCART terminal.

- You can also use a TV connected to a VCR with a SCART terminals.

a Press GRIP UNLOCK button and rotate the grip upward.
b To Audio Output Terminal (black)
c To Video Output Terminal (yellow)
d PC-150 SCART Cable
e To SCART Terminal
f TV

Using TV with Audio/Video Input Terminals

Connection Procedure 55-B

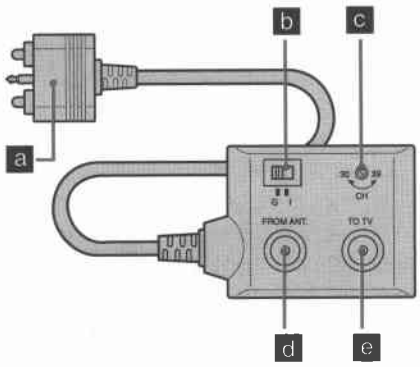
You need the optional C-150 AV Cable and a power source for playback on a TV that has audio/video input terminals.

- You can also use a TV connected to a VCR with audio/video input terminals.

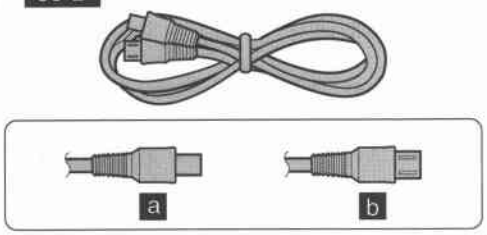
a Press GRIP UNLOCK button and rotate the grip upward.
b To Audio Output Terminal (black)
c To Video Output Terminal (yellow)
d C-150 (video=yellow, audio=white)
e To Audio Input Terminal
f To Video Input Terminal
g BNC Adapter*
h TV: Set TV/VIDEO selector to VIDEO

* For TV or VCR which has a BNC-type video input, use a commercially available BNC plug adapter for connection.

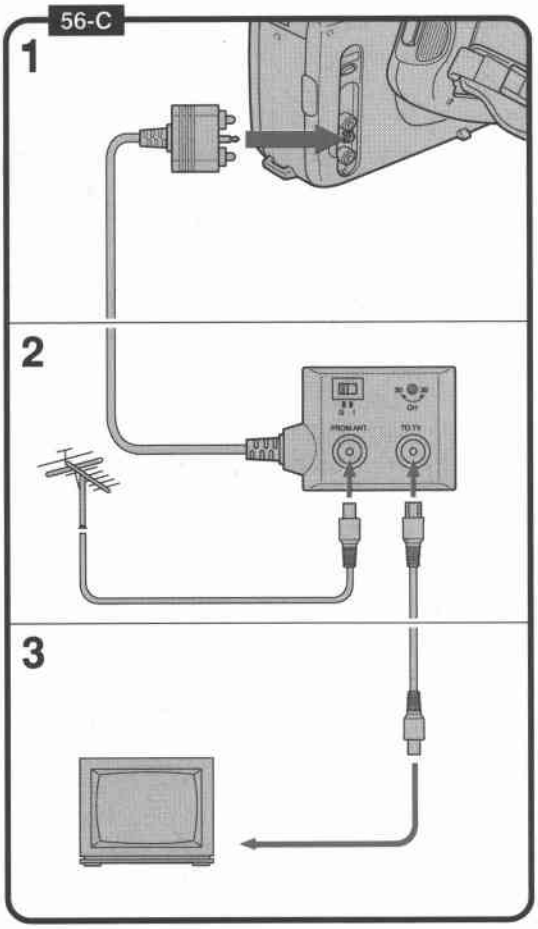
56-A



56-B



56-C



The optional RU-100 RF Unit is required in order to view recorded video cassettes on a TV which does not have audio/video input terminals. There are two RU-100 models, one for Europe and one for Australia. The connection and setting procedures for the two models differ.

Using TV without Audio/Video Input Terminals (European Model)

RU-100 56-A

- a Connection Plug
- b G/I Selector
- c Video Channel Selector
- d FROM ANT. Terminal
- e TO TV Terminal

Coaxial Cable with DIN-Connectors 56-B

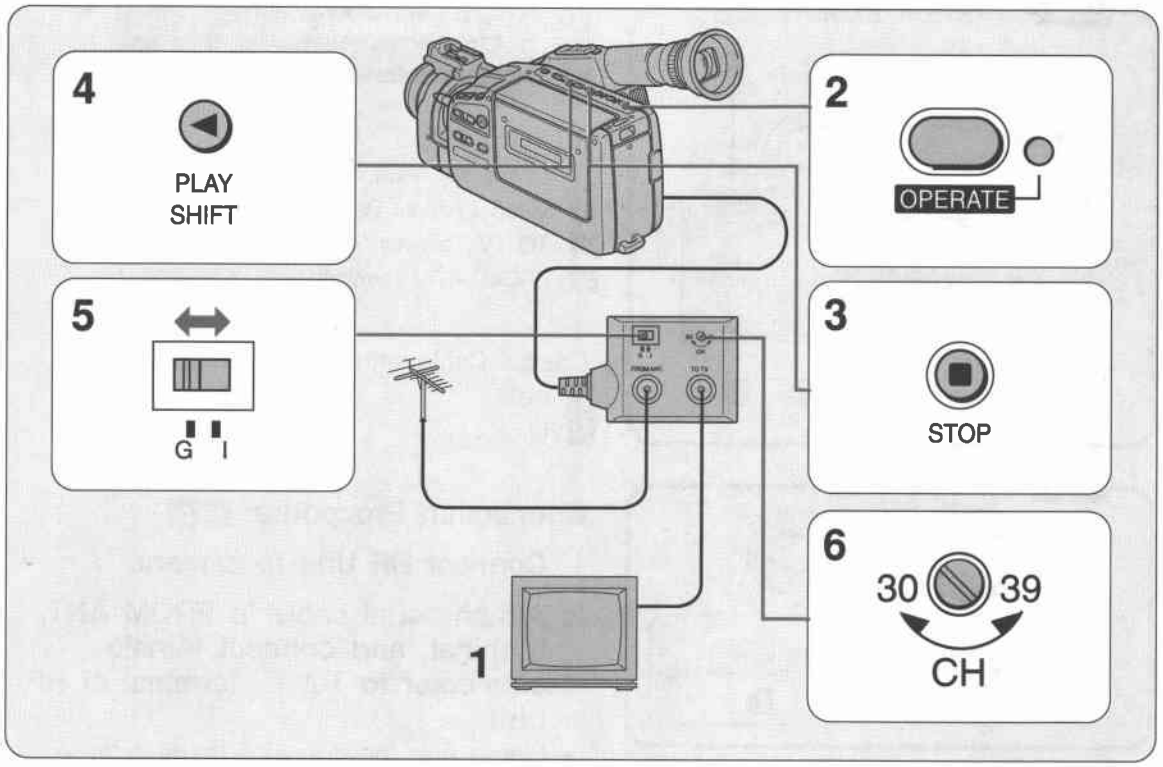
- a male
- b female

Connection Procedure 56-C

1. **Connect RF Unit to camera.**
2. **Attach aerial cable to FROM ANT. terminal, and connect female connector to TO TV terminal of RF unit.**
   - Please note the difference between 'male' and 'female' type DIN-connectors on coaxial cable.
3. **Connect male connector to aerial input terminal of TV.**

To View a Regular TV Programme

The RU-100 RF Unit has an automatic signal selector which selects the signal from the video camera whenever the camera is connected to the RF unit and the power is turned on. To view a regular TV programme, turn the camera off or disconnect it from the RF unit.

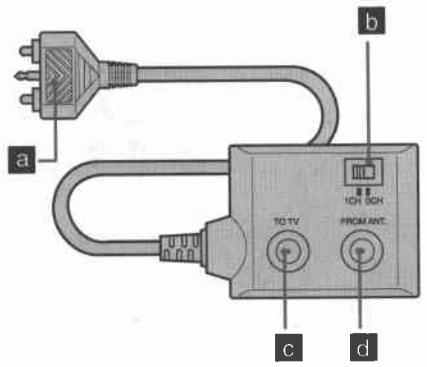


Selecting Video Channel (European model)

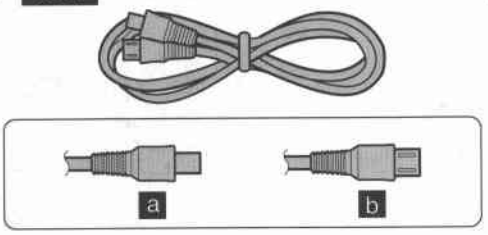
Video channel means the channel in your area which is not used by a broadcasting station (channel 30–39). If your TV does not have audio/video input terminals, your TV set and the video channel selector of the RU-100 RF Unit must be set to the video channel in order to view playback.

1. **Turn TV on.**
2. **Turn camera on.**
3. **Press ■ (STOP) button to select playback mode.**
4. **Press ◀ (PLAY) button to start playback.**
5. **Set RF unit's G/I selector using flat-edge screwdriver.**
   G: Continental Europe
   I : England, South Africa, Hong Kong
   - If G/I selector is set improperly, picture will appear, but no sound will be heard.
6. **Set TV and video channel selector to video channel (video channel selector is factory-set to CH 32).**
   - For example, if video channel in your area is channel 33, turn TV to channel 33, then use a flat-edge screwdriver to set video channel selector of RU-100 to CH 33. Adjust by turning until picture is clear.

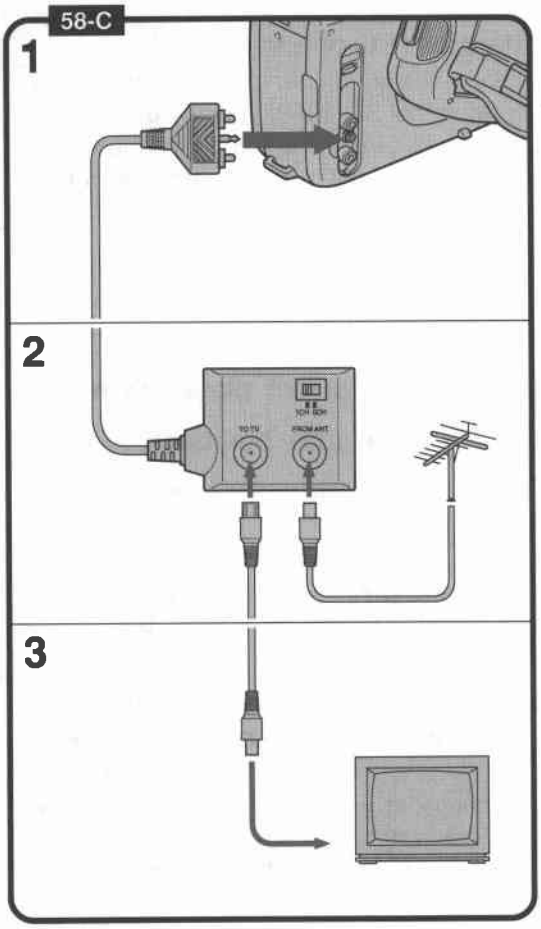
58-A



58-B



58-C



Using TV without Audio/Video Input Terminals (Australian Model)

RU-100 58-A

- a Connection Plug
- b Video Channel Selector
- c TO TV Terminal
- d FROM ANT. Terminal

Coaxial Cable with DIN-Connectors 58-B

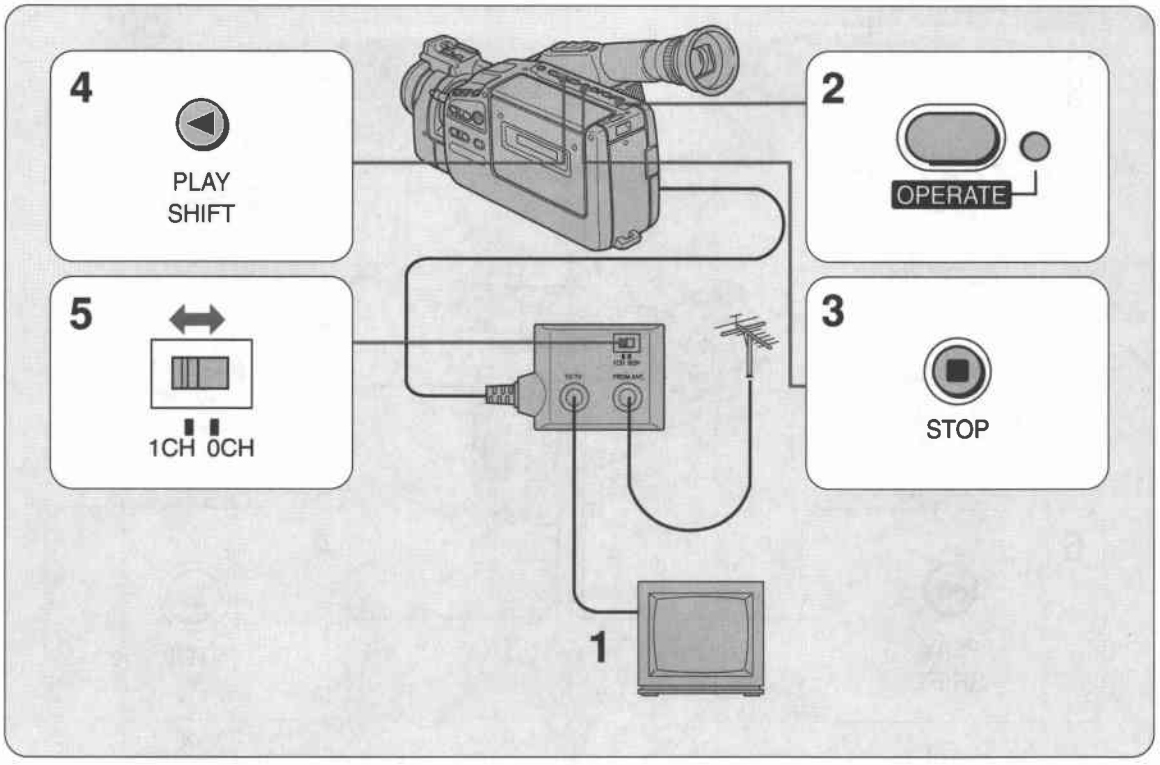
- a male
- b female

Connection Procedure 58-C

1. **Connect RF Unit to camera.**
2. **Attach aerial cable to FROM ANT. terminal, and connect female connector to TO TV terminal of RF unit.**
   - Please note the difference between 'male' and 'female' type DIN-connectors on coaxial cable.
3. **Connect male connector to aerial input terminal of TV.**

To View a Regular TV Programme

The RU-100 RF Unit has an automatic signal selector which selects the signal from the video camera whenever the camera is connected to the RF unit and the power is turned on. To view a regular TV programme, turn the camera off or disconnect it from the RF unit.

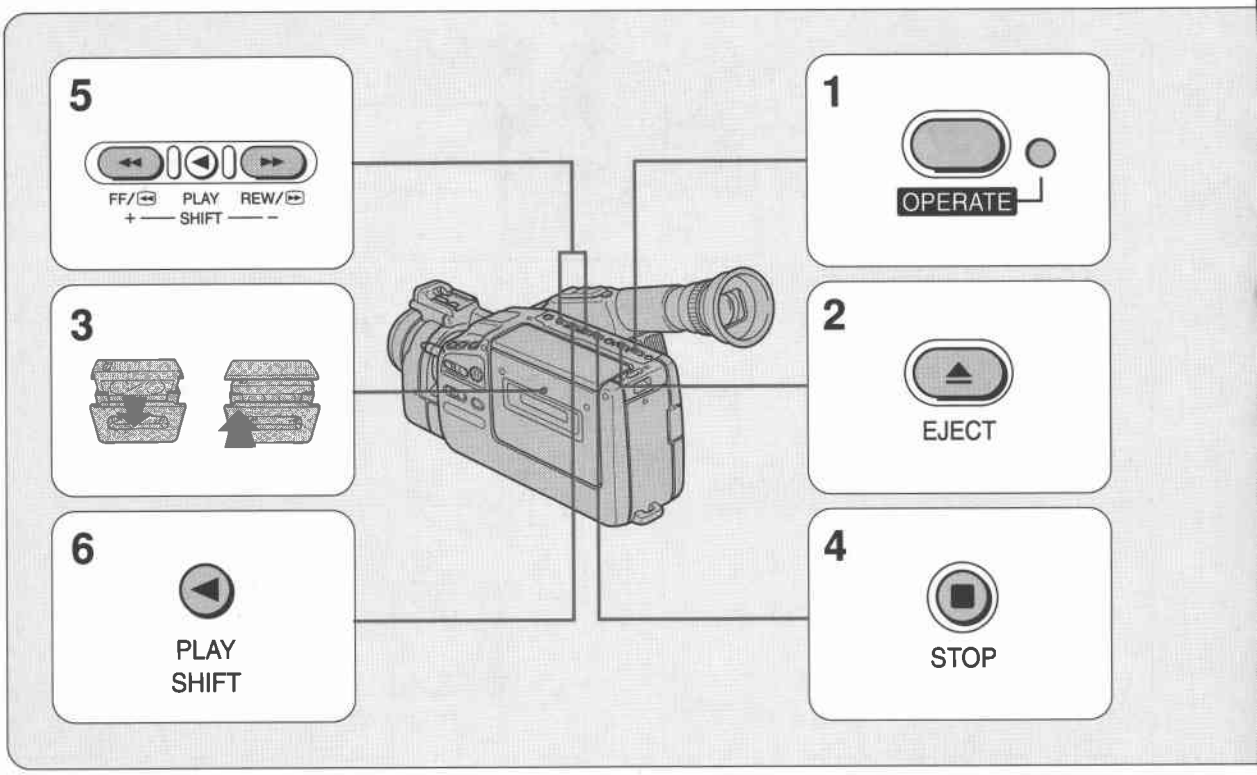


Selecting Video Channel (Australian model)

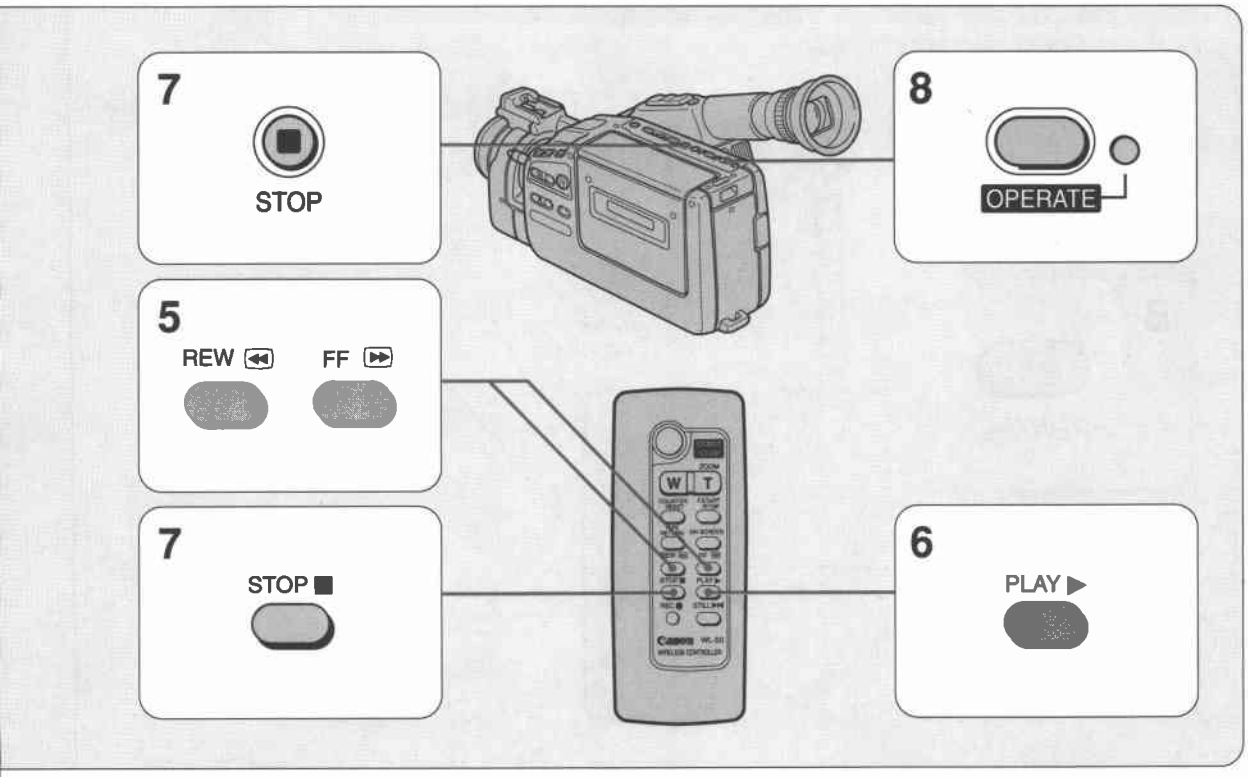
Video channel means the channel in your area which is not used by a broadcasting station, and can be used for playback of video cassettes (channel 0 or 1). If your TV does not have audio/video input terminals, your TV and the video channel selector of the RU-100 RF Unit must be set to the video channel in order to view playback.

1. **Turn TV on.**
2. **Turn camera on.**
3. **Press ■ (STOP) button to select playback mode.**
4. **Press ◀ (PLAY) button to start playback.**
5. **Set TV and video channel selector to video channel (video channel selector is factory-set to 1CH) using a flat-edge screwdriver.**
   - For example, if video channel in your area is channel 0, set video channel selector of RU-100 to 0CH, then tune TV to channel 0.

Playback Procedure



1. **Turn camera on.**
   - OPERATE indicator lights up.
2. **Press ⏏ (EJECT) button.**
   - Video cassette compartment opens.
3. **Load video cassette in camera and close video cassette compartment.**
4. **Press ■ (STOP) button to select playback mode.**
   - Playback functions will not operate if you haven't pressed ■ (STOP) button.
5. **Locate playback start point.**
   - Use REW and FF buttons to locate start point, or use high-speed search (see p. 63).
6. **Press PLAY button to start playback.**
   - You can also monitor playback in viewfinder.



7. Press ■ (STOP) button to end playback.

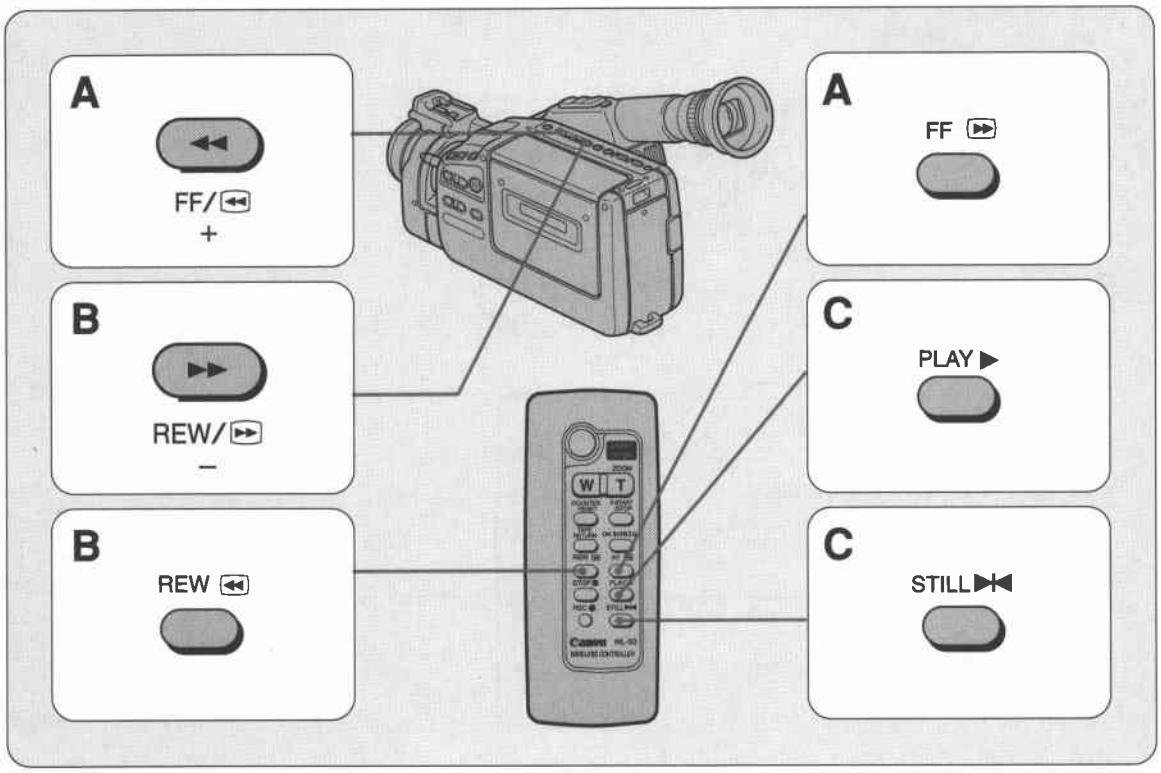
8. Turn camera off.

- OPERATE indicator goes off.

High-Frequency Feedback

- High-frequency feedback may occur if camera microphone is too close to the TV speaker (only during recording or record pause mode). Lower TV volume.

Special Playback Methods



In addition to normal playback, your camera also has fast forward, rewind and still playback, plus high-speed search.
Playback is controlled by pressing buttons on the camera or by using the wireless controller.

A. Fast Forward Playback

Press and hold FF button during normal playback to view scenes at 9 times normal speed.

- Release FF button to resume normal playback.

B. Rewind Playback

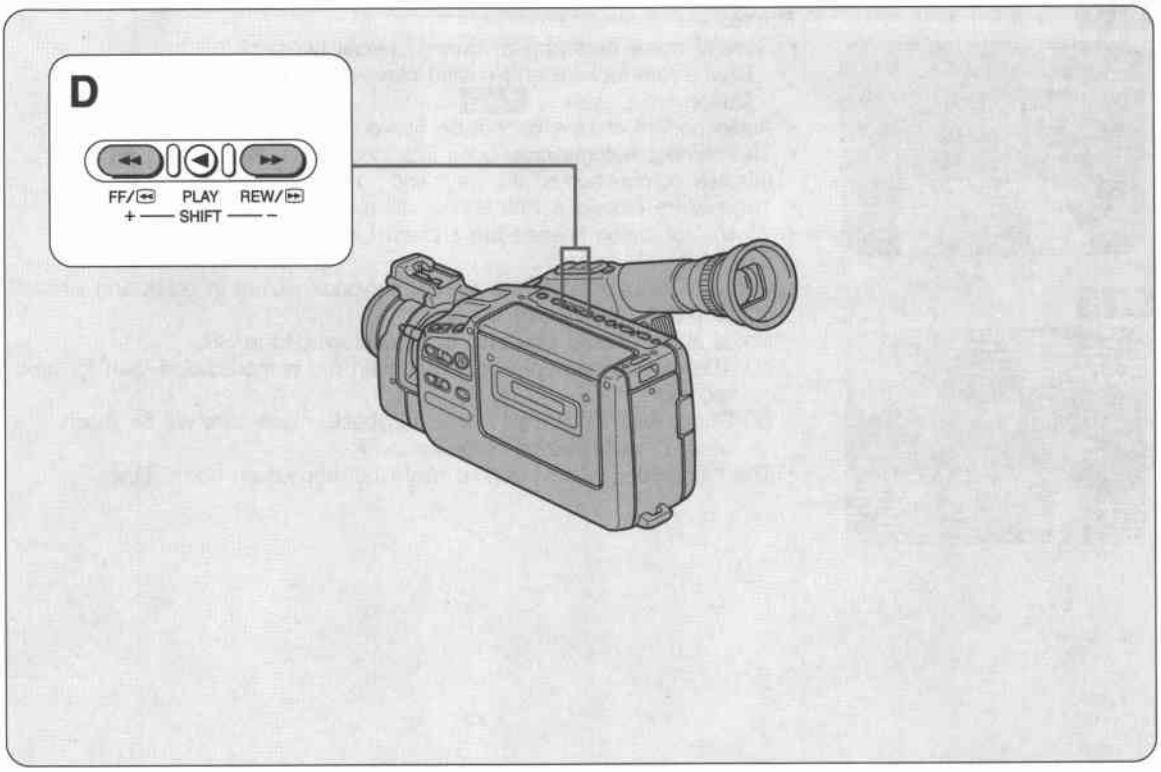
Press and hold REW button during normal playback to view scenes in reverse at 7 times normal speed.

- Release REW button to resume normal playback.

C. Still Playback

Press STILL button on the wireless controller during normal playback to pause the picture. Press STILL button again or PLAY button to resume normal playback.

- The camera's start/stop button can also be used.



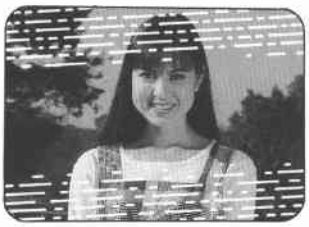
D. High-Speed Search

Press and hold FF button during normal fast forward mode to view scenes at approximately 15 times (SP) or 30 times (LP) normal speed. Release FF button to resume normal fast forward.

Press and hold REW button during normal rewind mode to view scenes in reverse at approximately 15 times (SP) or 30 times (LP) normal speed. Release REW button to resume normal rewind.

64-A

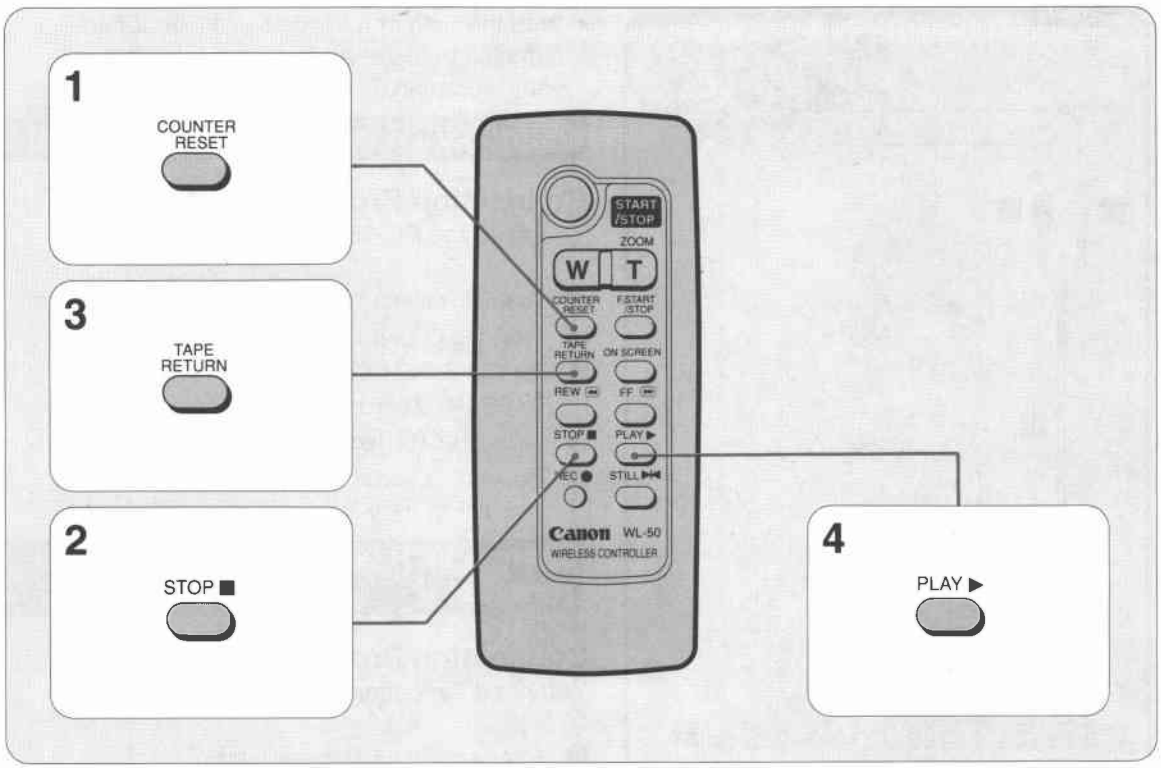
64-B



Notes:

- Several noise bars appear during special playback.
  During fast forward and rewind playback modes. 64-A
  During still playback. 64-B
- Audio portion of tape cannot be heard during special playback.
- The camera automatically goes into stop mode after more than 7 minutes of continuous still playback.
- The picture flickers a little during still playback.
- When fast action scenes are shown during still playback, the picture may blur.
- Certain TVs may show the special playback picture in black and white, or the picture may roll or divide.
- Notes about special playback of tapes recorded in SP:
  (1) The still playback picture will contain much more noise than for tape recorded in LP.
  (2) During fast forward or rewind playback, noise bars will be much wider than for a tape recorded in LP.
- The high-speed search picture might not appear on some TVs.

Tape Return



65-A

Tape return allows you to quickly return to a desired scene on the video cassette.

- Camera does not have a TAPE RETURN button. Use the wireless controller to operate tape return.

1. When you locate a scene during playback that you want to watch again later, press COUNTER RESET button.

- Tape counter resets to 0:00:00. 65-A

2. Press ■ (STOP) button when playback finishes.

3. Press TAPE RETURN button.

- Tape rewinds and stops automatically when counter reading reaches near 0:00:00.

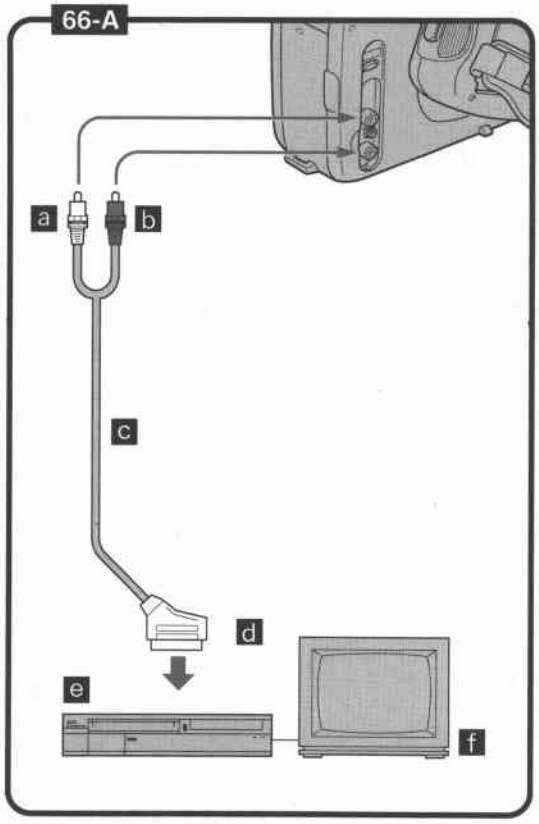
4. Press ▶ (PLAY) button.

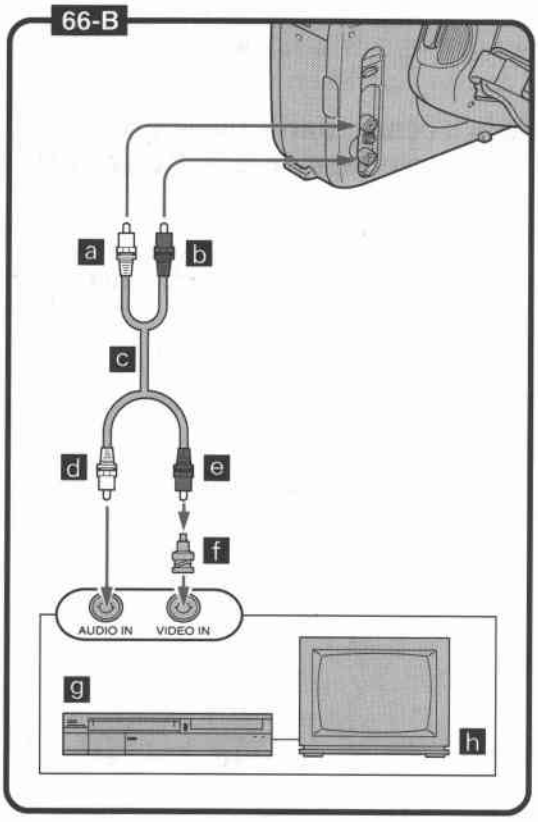
- Playback starts at the spot where you pressed COUNTER RESET button.

Notes:

- Every time you load a video cassette, the tape counter automatically resets to 0:00:00. This means that after recording you can use the tape return function to locate the recording start point.
- Tape counter reading is only approximate. Use it as a guide.
- Tape return does not function when tape counter reading is near 0:00:00.
- Press ■ (STOP) button to cancel tape return.

Editing to Another VCR





- With the help of a second VCR, your camera can also be used as a playback VCR to edit your recording.

Using a VCR with a SCART Terminal

Connection Procedure 66-A

You need the PC-150 SCART Cable.

- a To Audio Output Terminal (black)
- b To Video Output Terminal (yellow)
- c PC-150 SCART Cable
- d To SCART Terminal
- e Second VCR (Recording)
- f TV

Using a VCR with Audio/Video Input Terminal

Connection Procedure 66-B

You need the optional C-150 AV Cable.

- a To Audio Output Terminal (black)
- b To Video Output Terminal (yellow)
- c C-150 (video=yellow, audio=white or black)
- d To Audio Input Terminal
- e To Video Input Terminal
- f BNC Adapter (commercially available)
- g Second VCR (recording)
- h TV

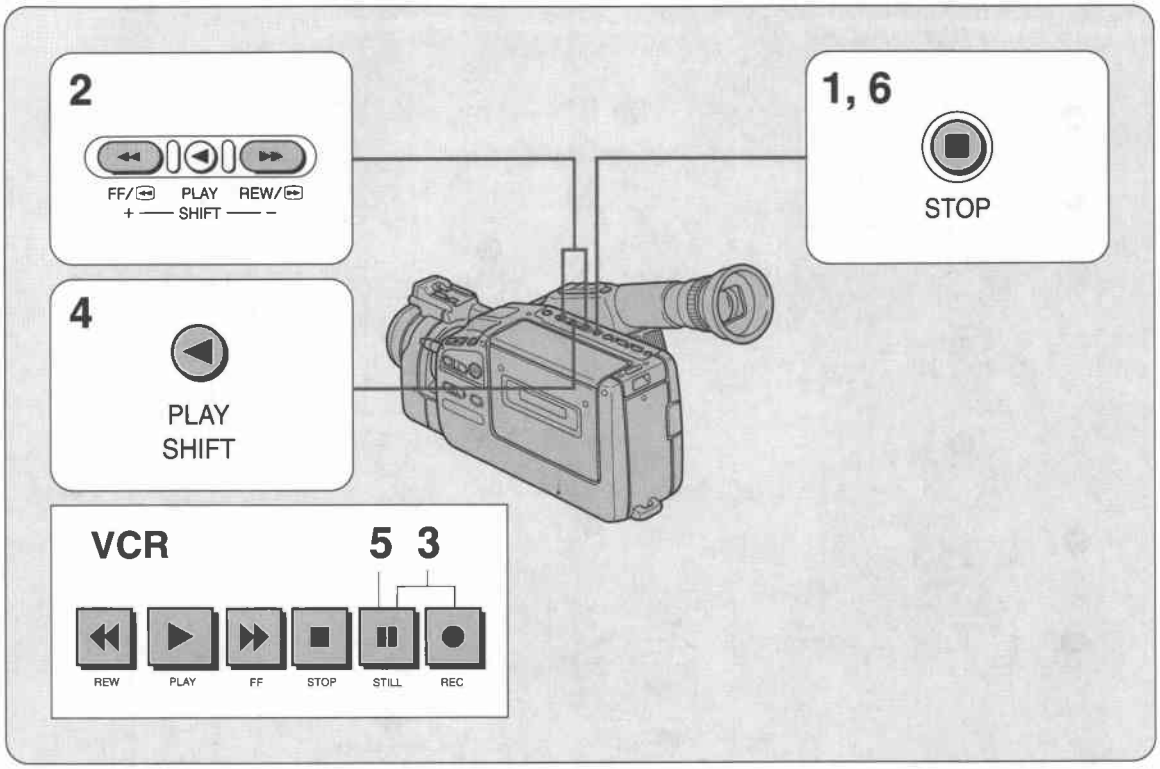
Preparations

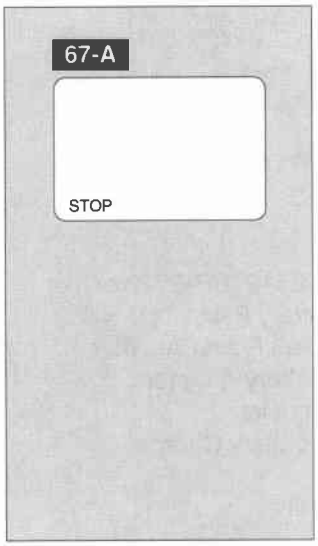
TV

Turn TV on and set it to the video channel or set the TV/VIDEO selector to VIDEO.

VTR

Turn on the second VCR and load a recordable cassette. Switch the input selector to the LINE which is connected to the camera. See VCR instruction manual for details.





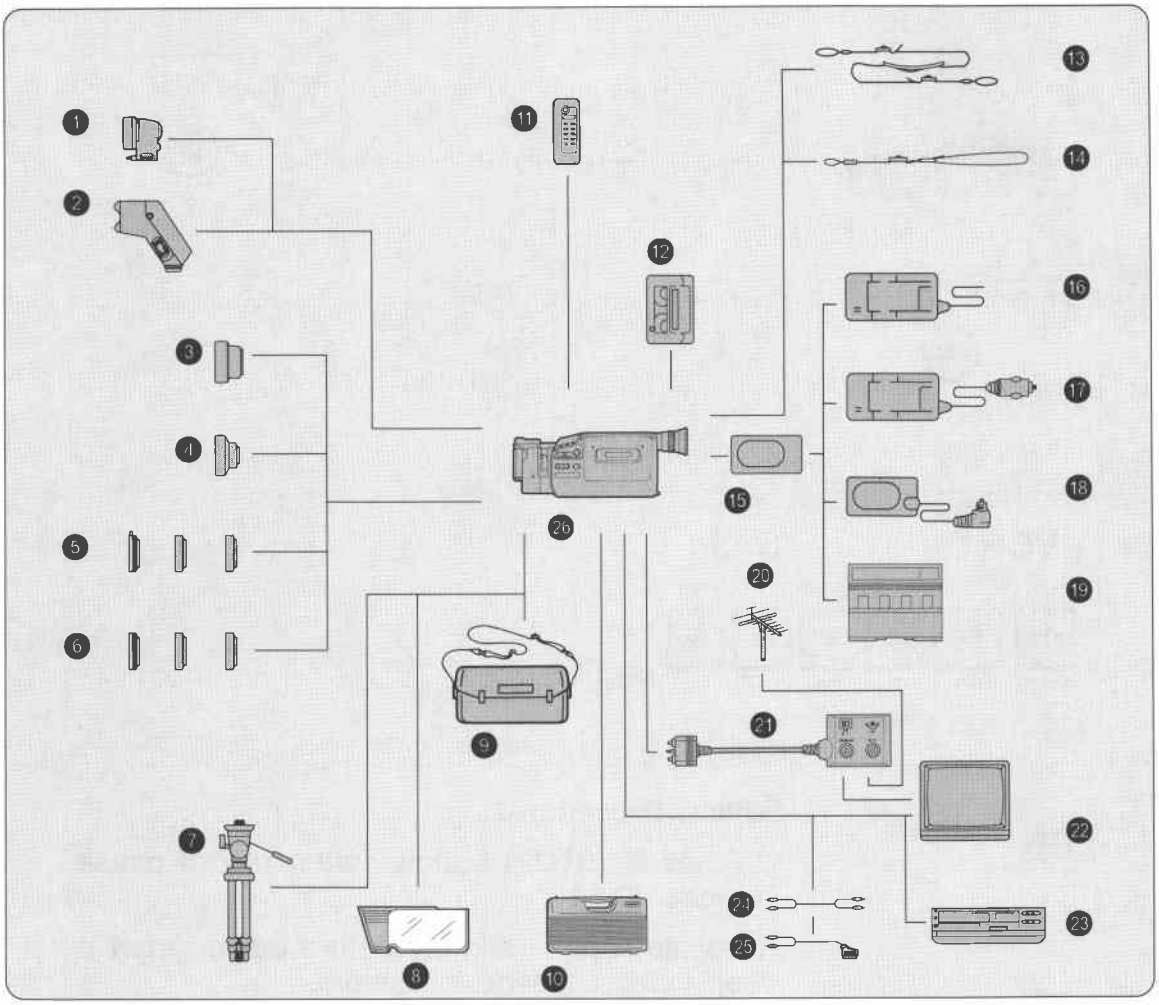
Editing Procedure

1. **Press ■ (STOP) button during record pause mode.** 67-A
2. **Locate a point slightly before editing start point on video cassette in camera.**
3. **Place second VCR in record pause mode.**
4. **Press camera ◀ (PLAY) button.**
   - Check playback picture on TV screen.
5. **Release second VCR from record pause mode at editing start point.**
   - Recording begins on second VCR.
6. **Press ■ (STOP) buttons on camera and second VCR to end editing.**

Note:

- Both image and sound quality of edited tape will be somewhat less than that of the original.

Canon E430 Video System Chart

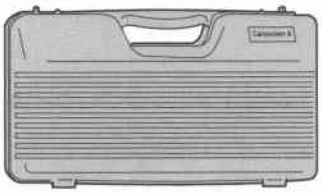


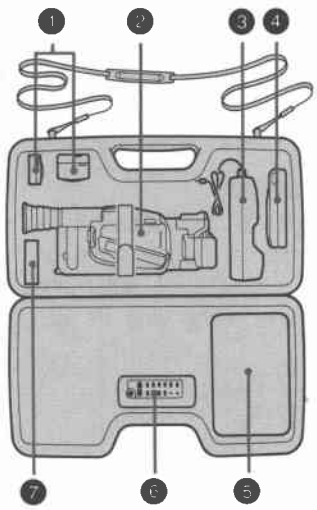
1. VL-7 Battery Video Light
2. VL-20 Battery Video Light
3. WD-37 Wide-converter
4. TL-37 Tele-converter
5. FS-37 Filter Set
6. FS-37U Filter Set
7. Tripod
8. RS-300 Rain Shield
9. SC-300 Soft Carrying Case
10. HC-300 System Case
11. WL-50 Wireless Controller
12. 8mm Video Cassette
13. SS-300 Shoulder Strap
14. WS-20 Wrist Strap
15. BP-E77K, BP-E718, BP-E722 or BP-E722D Battery Pack
16. CA-100 Compact Power Adapter
17. CB-110 Car Battery Adapter
18. DC-100 DC Coupler
19. MC-100 Multi-battery Charger
20. Aerial
21. RU-100 RF Unit
22. TV
23. VCR
24. C-150 AV Cable
25. PC-150 SCART Cable
26. E430

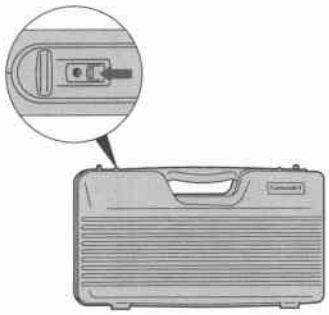
Carrying Cases

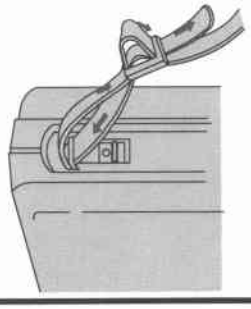
SC-300

HC-300









SC-300 Soft Carrying Case

The optional SC-300 Soft Carrying Case provides lightweight protection for the camera and accessories.

HC-300 System Case

The optional HC-300 System Case helps protect the camera and its accessories during transportation and storage.

The HC-300 properly stores the following items

1. BP-E77K or BP-E722 Battery Pack
2. Camera with video cassette and shoulder strap / wrist strap attached
3. CA-100 Compact Power Adapter or CB-110 Car Battery Adapter
4. BP-E718 Battery Pack
5. Coaxial cable or C-150 AV Cable, PC-150 SCART Cable, DC-100 DC Coupler, VL-7 Battery Video Light, RU-100 RF Unit, Wide-converter/Tele-converter, etc.
6. WL-50 Wireless Controller
7. One additional 8mm video cassette

Opening the Case

Slide the latches on both sides of the case as illustrated to open.

- Open case with "UP" sticker pointing upward.

Attaching Shoulder Strap

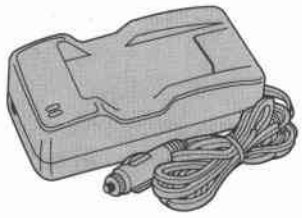
Attach shoulder strap to the strap attachment bars, and adjust it to the most comfortable length.

Notes:

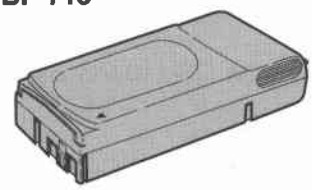
- Do not leave case in areas of extreme heat.
- Do not expose case to strong vibrations or shock.
- Do not place heavy objects on top of case.
- Two keys are provided with the HC-300 System Case.
- Power is slowly drained while the battery pack is attached to the camera, even when the camera is turned off. Remove the battery pack when you don't expect to use the camera.

Optional Accessories

CB-110

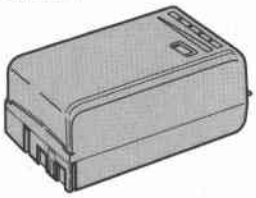


BP-718

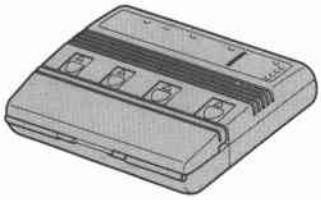


BP-E722

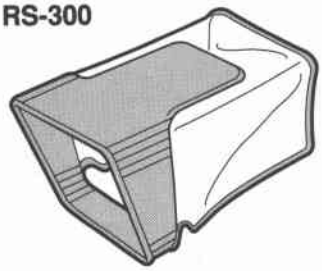
BP-722D



MC-100



RS-300



CB-110 Car Battery Adapter

For recording using car battery.
Plug into cigarette lighter socket.
For use only with 12 or 24 V DC negative ground car battery.

BP-E718 Battery Pack

Use when shooting for long periods of time. Continuous recording time of BP-E718 is approximately 100 minutes.

BP-E722 Battery Pack

Used for lengthy recording, its capacity is about double the BP-E77K. Hold the camera with both hands when using this battery.

BP-E722D Battery Pack

The BP-E722D is a rechargeable nickel cadmium battery equipped with 5 LED indicators for displaying the remaining charge.

MC-100 Multi-battery Charger

The MC-100 Multi-battery Charger is sequential high-speed charger controlled by a microcomputer for charging up to four Canon battery packs. Also the MC-100 automatically performs charging, discharging and recharging to refresh battery packs.

- Charging time: 45 min. (BP-E77K)
  80 min. (BP-E718)
  90 min. (BP-E722/BP-722D)

RS-300 Rain Shield

A vinyl cover to protect camera from light rain or mist.

VL-20

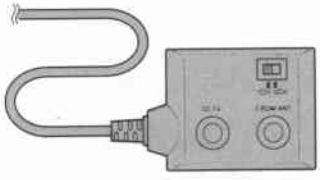
TL-37

WD-37

FS-37

FS-37U

RU-100



VL-20 Battery Video Light

This light, compact video light uses the BP-E77K or BP-E722 Battery Pack and is ideal for indoor or outdoor shooting.

TL-37 Tele-converter

This tele-converter is a magnification converter lens that increases the focal length of the camera lens by a factor of 1.4. Switch to manual focus when using this lens. The zoom can be operated as usual.

WD-37 Wide-converter

This wide converter decreases the focal length by a factor of 0.75. Switch to manual focus when using this lens. The zoom can be operated as usual.

FS-37 Filter Set

FS-37 Filter Set contains three filters: multiple image filter 5X, R-cross filter 6X and zoom-spot filter.

FS-37U Filter Set

FS-37U Filter Set contains three filters: UV, ND8 and circular PL.

- When using the PL filter, first zoom and switch to manual focus. Then adjust the PL filter to minimize light reflection.

RU-100 RF Unit

For easy playback on a TV without audio/video inputs, use the RU-100 RF Unit to connect the camera to the aerial socket.

Problems and Troubleshooting

Use the following checklist for troubleshooting when you have problems with your camera. Consult your local dealer or service outlet if problems persist.
Be sure all connections are properly made when using the camera with other units.

The following warnings may appear in viewfinder:

Warning	Cause	Remedy
	Battery pack charge is low.	Replace with fully charged battery pack.
	Condensation has formed inside unit.	Refer to Condensation (see p. 75).
	Safety mechanism is activated.	Unload and reload video cassette.
	Lithium battery is not in place properly or charge is low.	Insert new lithium battery (see p. 18).
	Video cassette is not loaded.	Load a video cassette.

Problem	Cause	Remedy
Camera does not turn on.	Battery pack charge is low.	Replace with fully charged battery pack.
Camera turns off during operation.	Battery pack charge is low.	Replace with fully charged battery pack.
	Record pause mode has lasted for more than 7 minutes.	Turn camera on again.
Video cassette compartment does not open.	Battery pack charge is low.	Replace with fully charged battery pack.
Camera does not function when an operation button is pressed.	Camera is turned off.	Turn camera on.
	Video cassette is not loaded.	Load a video cassette.
	Battery pack is not properly attached to the camera.	Attach battery pack securely to the camera (see p. 14).
Start/stop button is pressed, but recording does not start.	Camera is turned off.	Turn camera on.
	Video cassette is not loaded.	Load a video cassette.
	Tape has ended ("T. END" appears in viewfinder).	Rewind tape or use another video cassette.
	Erasure prevention switch on the video cassette is set to prevent recording.	Use another video cassette or set switch to enable recording (see p. 28).
	Camera is in playback mode.	Press ● (REC) button.
No picture appears in viewfinder.	Lens cap is attached.	Remove lens cap.
Cannot adjust focus.	Zooming lever is in macro range.	Move zooming lever into normal focusing range.
	Viewfinder dioptre is not properly adjusted.	Turn dioptre adjustment ring until viewfinder display becomes clear (see p. 25).
	Autofocus window is obscured.	Remove obstacle from autofocus window.
Playback doesn't start when PLAY button is pressed.	Camera is in record mode.	Press ■ (STOP) button.
	Camera is turned off.	Turn camera on and press ■ (STOP) button.
	Video cassette is not loaded.	Load a video cassette.
	Tape has ended ("T. END" appears in viewfinder).	Rewind tape or use another video cassette.

Problem	Cause	Remedy
Tape is moving, but no picture appears on TV monitor.	For TV without audio/video input terminal: Video channel not set properly on both TV and RF unit.	Set TV and RF unit to appropriate video channel.
	For TV with audio/video input terminal: TV/VIDEO selector on TV not set to VIDEO.	Set TV/VIDEO selector to VIDEO.
	Video heads are dirty.	Clean video heads using CK-E1 Cleaning Kit.
The video light will not turn on.	DC-100 DC Coupler is attached to the camera.	Remove DC-100 DC Coupler and attach battery pack.
	The battery pack is exhausted.	Charge the battery pack.
	Either the camera or the video light is not turned on.	Turn on both the camera and the video light.
	The bulb has burned out.	Replace the bulb.
	No video cassette.	Insert video cassette and place camera in record pause or record mode.
	Camera is not in record pause or record mode.	Place camera in record pause or record mode.

74-A

74-B

Smear 74-A

A luminous bar appears vertically on the screen where an excessively bright scene was recorded.
Smear is caused when:

- Spotlights are directly recorded, on a stage for example.
- Burning candles or other burning objects are recorded directly.
- Objects reflecting light, such as car bodies and traffic signs, are recorded directly.

Poor playback picture on TV monitor 74-B

Loss in video playback picture quality such as blurring, distortion or noise usually means that the video heads have become dirty. Use the optional Canon 8mm Video Head Cleaning Cassette CC-8 included in the Canon 8mm Video Cleaning Kit CK-E1 to clean video heads. See CC-8 instruction manual for details.

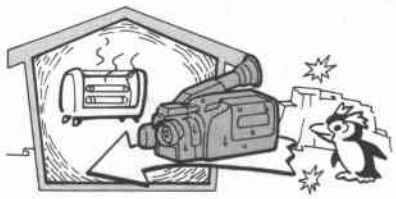
Note:

- This equipment contains a microprocessor. If external noise or interference occurs, random letters may appear in the viewfinder or normal operation may be interrupted. In this case, remove power source (and if necessary, remove the lithium battery) and then replace.

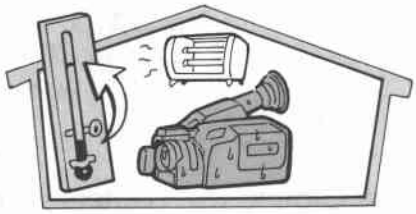
Condensation (DEW)

75-A

A



B



C

D

What is condensation?

Condensation (DEW) means tiny droplets of water that occasionally form on the camera surface when it is moved from a cold place to a warm place. Using the camera when condensation is present may damage both tape and camera.

Condensation is likely to occur when:

75-A

A. Camera is brought from a cold place to a warm place.

B. A cold room is heated rapidly.

C. Camera is taken from an air-conditioned room to a warm and humid place.

D. Camera is placed in a humid environment.

Preventing condensation

Remove video cassette and place the camera in a plastic bag prior to bringing it into a warm area where condensation is likely to occur. Wait until the camera reaches room temperature before removing it from the bag.

When condensation is detected

When condensation is detected in the camera, the OPERATE indicator flashes, "DEW" flashes in the viewfinder and the tape automatically stops. 75-B

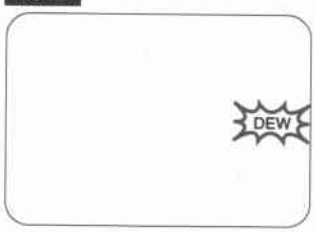
Immediately remove video cassette, leave video cassette compartment open and turn camera off. Leave the camera in a dry place until condensation evaporates.

- Sometimes "DEW" may not appear in the viewfinder until 10–15 minutes after condensation has formed.

To start using camera again

Even when "DEW" and the OPERATE indicator no longer flash when the camera is turned on, wait at least one more hour before attempting operation. The time required for condensation to clear varies with surrounding conditions; it can be as long as an hour.

75-B



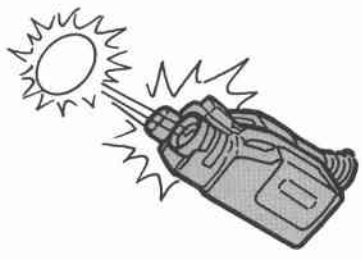
Cautions

A

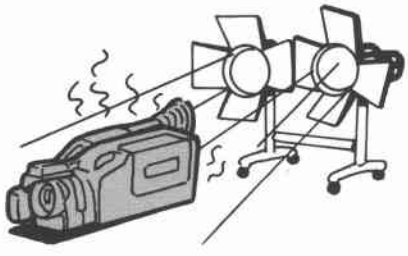
B

C

D



E



During Use

A. Avoid High Temperatures and High Humidity.

Do not expose the camera to high temperatures or high humidity, such as inside a car during hot weather, when all the doors and windows are shut. Such exposure can cause damage.

B. Avoid Exposure to Strong Electromagnetic Waves.

Do not use the camera close to sources of magnetic or electric fields (power plant, TV tower, TV set, magnets, motors, audio equipment, etc.).

C. Do Not Expose the Camera to Rain or Water.

Place protective covering over the camera if you'll be recording in the rain, to reduce the risk of fire or electric shock. If, somehow, water does get into the camera, contact qualified service personnel as soon as possible.

D. Avoid Pointing the Lens into Direct Sunlight or Other Strong Light Sources.

Do not aim the lens directly at the sun or other strong light, or leave the lens aimed at a very bright subject since this can cause damage.

E. Do Not Expose the Camera to Excessive Heat:

When using lighting equipment be sure not to expose the camera to too much heat radiating from such equipment.

F

G

H

I

J

F. Always Replace the Lens Cap.

Always replace the lens cap after use to prevent sand and dust from getting on the lens. Be especially careful to affix the cap on windy days.

G. Do Not Expose the Camera to Shock or Vibrations.

Be sure to handle the camera gently. Vibration or shock can cause damage.

H. Avoid Sudden Changes in Temperature.

If the camera is suddenly brought into a warm place from a cold place, condensation can form on the internal parts and lens. So take appropriate care when moving the camera.

I. Do Not Disassemble the Camera.

It is very dangerous to disassemble the camera or touch any of its internal parts, as you may risk electric shock or other hazards. If the camera does not function properly, take it to qualified service personnel.

J. Use the Battery Pack Correctly and Only Use Recommended Accessories.

Carefully read the instructions that come with the battery pack before use. And to reduce the risk of electric shock and to reduce annoying interference, use the recommended accessories only.

Using Your Battery Packs Effectively

Immediately After Purchase

Newly purchased battery packs have not been charged, so charge completely before using.

When charging brand new battery packs, charge until CHARGE indicator lights, and disconnect. Then reconnect and charge a second time.

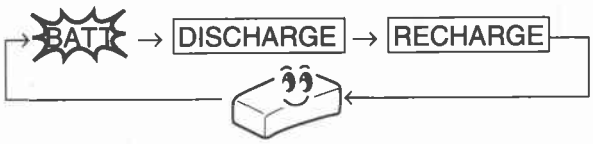
General Use

Battery packs can be charged when ambient temperature is between 0°C and 40°C. Best results are achieved between 10°C and 30°C.

After battery pack has been fully charged, do not continue to try to recharge it. Repeatedly recharging a fully charged battery pack can cause it to become overcharged.

Always discharge battery pack completely before recharging or storing. Repeatedly recharging battery pack before it is fully discharged will cause its electrical storage capacity to decrease. if the usage time has decreased, try one of the following methods of discharging the battery completely to restore it:

- Use a Canon product which has a discharge function such as the MC-100.
- It is also effective to leave the battery attached to the camera with the tape removed and wait until camera's OPERATE indicator goes out. Try turning the camcorder power on several times after it cuts off the first time. Remove the battery pack.



When using battery pack with the battery video light, be sure to disconnect battery pack when the light begins to grow dim. Continuing to use battery pack in such a situation may cause it to become overdischarged.

Immediately after use, battery pack will be hot and it is best not to recharge it at this time. Make sure that battery pack has cooled off before recharging.

When battery pack has been overdischarged, you may be unable to recharge it completely (battery pack will not recharge fully even though charge indicator lights). In such a case, charge and discharge battery pack repeatedly (2 or 3 times) until it is recharged properly.

Storage

When battery pack is connected to the camera, it will continue to discharge even when the power is turned off, and this may cause it to become overdischarged. Disconnect battery pack from camera when storing.

When storing the battery pack for a long period of time, choose a cool, chemically stable location. Allow it to discharge completely by connecting it to the camera and waiting until OPERATE indicator goes out (about 10 minutes after it begins to flash).

If battery pack has been stored for three months or longer, a single recharging will not be sufficient to restore it to full operability. In such a case, completely recharge and completely discharge battery pack 2 to 5 times. This will restore it to its original capacity.

Terminology

Overcharging and overdischarging will cause battery pack to function less effectively, and shorten its life.

Overcharging:
Charging battery pack after it has already been fully charged.

Overdischarging:
Continuing to discharge battery pack after its voltage level has fallen below a specified level (5.0 V for the nickel cadmium batteries used by Canon 8mm video camcorders).

Charge memory:
When a nickel cadmium battery is discharged only partially (not long enough for charge to cut off automatically), and then recharged and used again, continuous recording time decreases. The battery pack will be temporarily incapable of discharging to final voltage level.

Maintenance

Keep the Heads Clean.

The video heads should be cleaned only when necessary, preferably with the Canon 8mm Video Head Cleaning Cassette CC-8 included in the Canon 8mm Video Cleaning Kit CK-E1.

Clean the Camera with a Soft, Dry Cloth.

The camera should be cleaned using a soft, dry cloth. Do not use chemically treated cloth or volatile solvent such as paint thinner, since this can damage the camera.

Store the Camera Properly.

If you do not intend to use the camera for some time, store it in an area free of moisture and dust, and where the ambient temperature is no higher than 30°C.

Store Cassette Tape Properly.

Do not place video cassettes in areas exposed to direct sunlight, near heat-radiating sources such as stoves, or close to magnetic bodies such as speakers, since these can cause tape deformation and damage to valuable recordings.

Check the Operation of Each Component.

If the camera has not been used for a long time, be sure to check that each component functions correctly before use.

Specifications

E430

Power supply (rated):	6 V DC
Power consumption:	5.7 W (during recording in autofocus mode)
Television system:	CCIR standard (625 lines, 50 fields) PAL colour signal
Video recording system:	2 rotary heads, helical scanning system Luminance signal: FM azimuth recording Colour signal: Converted subcarrier phase shift recording (8mm video standard)
Audio recording system:	Frequency multiplexing with the video signal by 2 rotary heads (1 channel)
Image sensor:	1/3-inch CCD (charge-coupled device): 320,000 pixels (300,000 effective pixels)
Tape format:	8mm, metal particle*
Tape speed:	20.051 mm/s (SP) 10.026 mm/s (LP)
Maximum recording time:	3 hours with P5-90 video cassettes, in LP mode
Lens:	f/1.8, 8X power zoom, 7.0–56 mm focal length, macro mechanism (wide/tele)
Focusing system:	Active autofocus (using infrared beams), manual focusing possible
Minimum focusing distance:	0.6 m or 4 mm in wide macro
Minimum illumination:	3 lux (in gain-up mode)
Recommended illumination:	More than 100 lux
Filter diameter:	37 mm
Electronic viewfinder:	0.6-inch monochrome CRT
Microphone:	Nondirectional electret condenser microphone
Output level:	Video: 1 Vp-p/75 ohms unbalanced (video output terminal); Audio: –10 dBV/less than 3 k ohms, unbalanced (audio output terminal)
Dimensions (Width x Depth x Height):	106.5 x 302 x 108 mm
Weight:	910 g excluding battery pack and video light

VL-7 Battery Video Light

System:	Video light can be attached to the main body via the accessory shoe, and can be turned on or off during recording or record pause mode.
Central light intensity:	Approx. 120 cd
Illumination angle:	Approx. 30°
Central luminosity:	Approx. 15 lux (3 m)
Colour temperature:	Approx. 3200 K
Power consumption:	6 W (6 V)
Required bulb:	Canon Halogen Bulb MHL-5.7V 6W
Bulb life:	Approx. 50 hours
Operating temperature range:	0°C–40°C
Power supply:	Battery pack mounted on the main body
Illumination time:	Approx. 15 min. (with BP-E77K in continuous use)
Dimensions (W x D x H):	40 x 43 x 56 mm
Weight:	35 g

* Canon recommends metal particle tape.
Weight and dimensions are approximate. Errors and omissions excepted.
Subject to change without notice.

MEMO

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